VARROC Lighting Systems

Global Supplier Quality Manual for 4 wheels vehicles

Revision 2.1

FOREWORDS

From Supplier selection up to product end-of-life management, Varroc Lighting Systems (VLS) permanently searches for the best suppliers capable to manage projects in time and to deliver conform components in the highest quality, in order to meet all Customer requirements.

VLS is committed to provide products with high quality standard to all its customers, and to satisfy to all its customer requirements with determination and excellence.
VLS expects the same from its suppliers, in order to build sustainable relationship and business growth partnership.

This Global Supplier Quality Manual presents VLS requirements regarding manufacturing and components quality, both in development and in serial production.

VLS will accompany and develop its partner suppliers which are fully committed to a permanent pursuit of improvement and excellence.

Global Supplier Quality Director
Daniel Lacko

Global Purchasing Director
Mateusz Rak

Supplier partner acknowledgement and approval of this Global Supplier Quality Manual:

Company name:

Name:

Function:

Signature:

Date:

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Introduction

VARROC Lighting Systems, i.e. Varroc Lighting Systems Inc., with its seat in Plymouth, U.S. (47828 Halyard Dr., Plymouth, MI 48170) and its Affiliates (hereinafter jointly referred to as 'VLS'), aims to permanently progress and improve each aspect of its supply chain through a strong collaboration with all its suppliers, having agreed in advance on a planning of defined activities, and following continuously its accurate execution.

By establishing this partnership, both VLS and VLS suppliers will be able to build a sustainable and profitable growth.

Scope

This manual defines the guidelines, requirements and procedures VLS is expecting to be strictly applied by all its external suppliers (hereinafter : the 'Supplier') for direct (production) materials.

The current version of IATF 16949, ISO 9001, VLS General Terms and Conditions of Purchase, VLS Packaging and Labeling Standards, and this document, define the fundamental quality system of VLS.

Additional requirements may be provided by VLS, as required, based on written agreement between VLS and Supplier.

The requirements apply throughout Supplier's entire productive value-stream, including sub-Supplier processes. Suppliers are responsible to cascade all such VLS requirements within their entire supply chain.

Any non-compliance with this document shall be concerned as a material breach of Supplier's obligations towards VLS and may result, regardless of any other legal sanctions to be adopted, in the loss of existing and/or future businesses (i.e. placing the Supplier on New Business Hold).

References

VLS Global Supplier Quality Manual, VARROC Global Quality Policy, VARROC Customer Specific Requirements, VLS General Terms and Conditions and further information are available on VLS Supplier Portal : https://supplierportal.varroclighting.com

Additional reference information are provided in each applicable section of this manual.

General

As VLS is an international company, it is the responsibility of each Supplier to provide documentation and communication in English.

1. Supplier Selection

VLS is selecting and assessing its potential suppliers through VISA audit (VARROC Initial Supplier Assessment) to validate their capability, competence and performance in regards to VLS expectations and requirements. This process is conducted prior to entering a Supplier into VLS supplier panel.

1.1 Suppliers Category

VLS is assessing and selecting suppliers for developing existing and future businesses.

Here below the categories of suppliers VLS may be engaged with :

- Supplier "**Designer & Manufacturer**": Supplier, along with VLS, designs parts which are responding to VLS needs and specifications. The Supplier-designer is therefore responsible for the definition, the manufacturing and the supply of the parts. The APQP procedure (see section 2 – Product Industrialization) is fully applicable for this category of supplier.
- Supplier "**Manufacturer**" : Supplier-Manufacturer produces and delivers parts designed by VLS. The Supplier-manufacturer is therefore responsible for the manufacturing and the supply of the parts. The APQP procedure (see section 2 – Product Industrialization) is fully applicable for this category of supplier.

- Original Equipement Manufacturer (OEM) Customer "**Directed Supplier**" (also referred to as: OEM Customer Imposed Supplier): a written and signed definition of responsibilities (hereafter referred to as "RASIC") of each involved/recommended parties, is necessary in this case. This shall be a pre-requisite before launching any partnership.

  RASIC available at **Appendix #1**
- Supplier "**Subcontractor**": Supplier-subcontractor performs specific tasks ordered by VLS (VLS being the contractor) and/or provides an added value on products delivered by VLS. The APQP procedure (see section 2 – Product Industrialization) is partially applicable for this category of supplier (to be defined by VLS Supplier Quality Development (hereafter referred to as "SQD")).

1.2 Minimum Certification Requirements

Subject to the provision below, Supplier shall be IATF 16949 certified by an IATF-recognized certification body, carrying the IATF logo and a dedicated IAFT registration number, unless otherwise notified by VLS.

Exceptionally, upon VLS decision, Supplier may not yet hold the IATF-certification, but such supplier shall be at least ISO 9001 certified at the latest revision, and is obliged to present to VLS a plan to obtain IATF certification within one [1] year, supported by an evidence provided by IATF certification body.

Any changes in the certification plan need to be communicated to VLS and must be approved by VLS as soon as they occur.

With regards to ISO 9001, Supplier must be certified to ISO 9001 through third-party audits; unless otherwise specified by the customer, Supplier shall demonstrate conformity to ISO 9001 by maintaining a third-party certification bearing the accreditation mark of a recognized IAF MLA (International Accreditation Forum Multilateral Recognition Arrangement) member and where the accreditation body's main scope includes management system certification to ISO/IEC 17021.

VLS requires all its suppliers to demonstrate the existence and the application of an environmental management system. VLS recommends the adaptation of the ISO14001 Environment Management Systems certification and, when assigning new business, VLS will give preference to suppliers which are compliant to such certification.

Supplier shall, at all times, keep Varroc supplier portal updated with a copy of the valid Supplier quality certifications. Any modification of Supplier certification status (like initial certification, certification renewal, certification withdrawal or cancellation, change of certification body…) should be communicated to VLS SQD within five [5] working days, as from its reception.

VLS requires that all sub-suppliers are at least third-party registered to ISO 9001 standard. VLS strongly encourages its suppliers to support IATF 16949 certification of their own suppliers.

VLS reserves the right to require that Supplier complies with the principles outlined in "CQI-19 AIAG sub-Supplier Management Process Guideline" to address issues identified in the organization's supplier development and management processes.

Evidence of effectiveness will be based on having a defined process and its implementation, including its measurement and its monitoring.

All quality certificates shall be provided in English.

1.3 Customer Specific Requirements (CSR)

VLS requires its suppliers to meet all VLS and OEM Customer Specific Requirements at latest released revision.

Latest VLS Customer Specific Requirements are available on VLS Supplier portal (link1) and OEM Customer Specific Requirements can be found on below link (Link2): :
Link1: https://supplierportal.varroclighting.com
Link2: https://www.iatfglobaloversight.org/oem-requirements/customer-specific-requirements/

Supplier not fully compliant to VLS CSR and/or OEM CSR shall submit, and consequently obtain an approved Varroc deviation. The deviation request shall be sent by email to the assigned SQD Engineer and to the Region SQD Manager / Leader. SQD Engineer will analyze the request and will provide a feedback by email within ten [10] working days. Without SQD Engineer authorization, any change cannot be implemented or considered as approved.

For further details, please refer to: **VF-SCM-408a Supplier Request for Varroc CSR Waiver**

1.4 Supplier Obligations

Supplier is obliged to :

- Comply with all applicable governmental regulations, in addition to statutory requirements governed by law and regulatory requirements related to state, national, or international laws. When different, applicable government regulations refer to those in the country of receipt by VLS, country of shipment, the country of sale and the OEM-identified country of destination.
- Comply with VLS Sustainability policy, Ethics & integrity policy, Anti-slavery and Human Traffic Policy (see Supplier Portal).
- Meet all commercial, financial, trade and tax requirements of the concerned VLS country of receipt.
- Notify VLS of any potential or actual non-conformance in Products supplied to Varroc that may affect its form, fit, function, quality, reliability, safety, delivery, service or its compliance with regulatory and statutory requirements, within one [1] working day from its detection.
- Facilitate an on-site Supplier assessment survey and/or audit conducted by VLS personnel, whenever requested, at the SQD, Supplier Quality Commodity (SQC) or Purchasing Representative's discretion. The assessment may be expanded to include additional requirements as specified by the VLS Product Development Team.
- Inform VLS, should the Supplier be subject of any open investigation on environmental offences by any local, national or international agencies.
- Inform VLS in case of Supplier's financial distress, either potential or actual, which may affect Supplier's due performance.
- Provide financial statements in order to evaluate supplier's financial stability, if requested by VLS.
- Inform immediately VLS (not later than one [1] full business day of occurrence) of any Force Majeure event.
- Review and confirm feasibility statement as well as participate in Technical Reviews, as requested by VLS.
- Ensure that Supplier's personnel (including sub-suppliers) has sufficient competence and required qualifications. Evidence to be provided at any time upon VLS request.
- Conduct and provide VLS with a yearly self-assessment of the latest available edition of applicable AIAG CQI standards (according to Supplier's technologies and activities), and it may be conducted as part of the organization's internal quality audit or conducted separately.
- Acknowledge, sign and meet all the criteria defined by this manual (see page 2 of this manual)

1.5 Supplier Profile

Supplier shall provide VLS with all requested company data in order to proceed with supplier set-up in VLS system, and supplier should notify VLS about any change regarding these data.

In particular, in the event of any change in structure, company name, ownership, or contact person, Supplier must communicate the change(s) to VLS Purchasing in a reasonable time frame.

1.6 Supplier Facility Access

Upon a five [5] days prior to VLS notice, Supplier shall grant access to its facilities, or to its sub-Supplier facilities, to VLS employees and VLS customer employees if required, for the purpose of evaluating products, processes, documents (including but not limitted to FMEAs, Control Plans, Process Instructions), methodologies and systems used in the manufacturing of VLS products, and to verify that the products and sub-contracted products are compliant to requirements and specifications.

If required, Supplier will grant access to VLS employees to its premises in order to collect VLS-owned tools and other capital equipment.

In case of crisis or Force Majeure, this prior VLS notice time could be reduced to twenty four [24] hours.
VLS may, at its own discretion, recourse to independent auditors/contractors for the purpose outlined above.

1.7 Supplier Quality System Certification Status Revocation

Should the Supplier repeatedly underperform, or is found responsible for counterfeit part deliveries, or fail to comply to VLS requirement due to non-conformities in its process, its system or its product, VLS may report the situation as a "Significant Quality Event" to relevant IATF certification body, and request the suspension of the quality certification until Supplier implements and demonstrates implementation of effective corrective measures.

1.8 Supplier Contingency Plan (IATF 16949. 6.1.2.3)

Supplier shall develop and deploy a contingency plan covering all identified risks which may potentially disrupt the products manufacturing and delivery to VLS plants, and Supplier shall warn VLS at the earliest (not later than twenty four [24] hours) in the event of an actual disaster.

The same requirements shall be cascaded by Supplier onto its sub-suppliers.

Potential losses caused by Force Majeure cases, including fire, city water, electricity, flood, storm, pandemic, cyber attack, should be prevented by reactive and organizational measures (through a formalized, validated by VLS and yearly reviewed contingency plan).

In such cases, Supplier shall provide VLS's authorized representatives immediate access to all of VLS or VLS's customer owned capital equipment.
Supplier shall maintain the adequate safety stocks of products at its own cost.

Supplier (at its expense) shall ensure that it has sufficient property and liability insurance which covers and provides the quick replacement of all equipment and sub-components used to manufacture products purchased by VLS. VLS may, at its sole discretion, request documental evidence of such insurance.

1.9 Safety, Statutory and Regulatory characteristics

Supplier shall comply to all statutory requirements which refer anything relating to a decree or act, and to all regulatory requirements related to state, national, or international laws and regulations.
These legal requirements are mandates that Supplier needs to follow for its products in order for them to be made legally available for sale.

Supplier is due to ensure duly :
- the application of all regulatory characteristics provided by VLS
- the identification of all regulatory characteristics on all relevant internal documentation
- the compliance to all regulatory requirements, and should be able to demonstrate it
- the prohibition of any change impacting a regulatory characteristic, unless a prior authorization from VLS is obtained
- an immediate communication to VLS in case a non-conformity is detected impacting a regulatory characteristic

Note : Any recycled material is prohibited in VLS products (unless it is specified and authorized by VLS).

2. Product Industrialization

2.1 Supplier Statement Of Work (SSOW)

For all programs and for all applicable components VLS will purchase from its suppliers, Supplier shall receive an SSOW which has to be acknowledged and signed for each defined functional perimeter and responsibility.
The SSOW describes project-specific and customer-specific VLS requirements for a given component/set of components and for a defined program. Supplier shall not be authorized to launch any new program prior to the full acceptance and signature of the corresponding SSOW.

2.2 Advanced Product Quality Planning (APQP) - Varroc Product Development System (VPDS)

APQP is to be initiated as from the program design concept, and should be deployed until the product launch for each new component.
All suppliers, regardless of component complexity or criticality, shall apply, respect, and duly follow the APQP process as from the launch of new component for VLS.

Components criticality definition falls under VLS Product Development team responsibility and is set during product development phase using Varroc's VPDS.

At this stage of program development, VLS Supplier Quality Development engineer will conduct the Supplier Risk Assessment for each component through Launch Readiness Review (LRR).

The development of error-proofing and Poka Yoke systems is expected to be taken into account by Supplier during the design of its manufacturing processes, targeting the 'zero defects', and with a robust preventive system.
Supplier has to demonstrate its ability to comply with volume and capacity requirements, in order to meet VLS and VLS customer demand (VF-SCM 403).

All suppliers shall provide APQP status reports for any new product as specified by VLS requirements.

For further details, please refer to: **VF-SCM-403b Varroc Supplier APQP Management System**

2.2.1 Pre-Production/Pre-serial Samples Delivery

The pre-production/pre-serial samples are deemed to be the mock-ups, prototypes or first of tool parts.

a) For Mechanical parts :

Supplier and their sub-suppliers (including toolmakers) have the responsibility to ensure the dimensional convergeance versus the defined and agreed specifications prior to submit any pre-production/preserial parts to VLS.

The supply of pre-production/pre-serial parts (aimed for engineering validation) shall be accompanied with documentation related to the specifications notified on drawings.
For each delivery Supplier must submit at least:

- Engineering Sample Evaluation Report (ESER) including:
  - Dimensional conformance report
  - Material conformance report
  - Functional validation report
- Material Safety Data Sheets
- Component record sheet (traceability) & component maturity level (Suffix)

All pre-production/pre-serial parts should be duly identified to avoid any mixture with other serial parts. The recipient, the part designation, the part number, and the suffix should be the minimum required visible information on the label applied on the packaging.

b) For Electronic parts :

B-samples : first pre-production samples shall comply with the provided Bill Of Material (BOM) and shall use serial-production representative assembly methods and materials (SMT line, solder paste).

PCBs may be manufactured out of a prototype process, routing may still utilize prototype methods and ICT testing is not required.
Solder quality must comply with IPC-A-610 class 3. An interim EOL testing needs to be agreed with VLS Product Development (PD).

C-samples : they must be representative of an enhanced industrialization process, they must comply with the provided BOM and they must be assembled on the serial production line with serial processes (serial SMT line including SPI and AOI).
PCBs must come from definitive supplier and must be manufactured out of a serial process. Final routing processes must be applied.
Solder quality must comply with IPC-A-610 class 3 and shall be checked by AOI.
Depending on lead-times, first C-samples might still miss ICT and EOL. An interim EOL test needs to be agreed with VLS PD. Final ICT and EOL shall be applied for the build of PPAP samples.
Any deviation on processes and materials requires concurrence from VLS PD and SQD.

2.2.2 Design Validation Plan & Report (DVP&R)

"Supplier-Designer & Manufacturer" shall provide VLS with the product Design Validation Plan (DVP) for approval. This DVP is deemed approved when validated by VLS PD engineer/Leader.
The resulting Design Validation Report that will follow shall respect the prior approved DVP.

2.2.3 Process Validation and Run-at-Rate

As part of APQP process, Supplier must prepare its manufacturing process and its related documentation, to demonstrate that his process will be capable to produce the parts at the expected pace and quality requirements, meeting the contractual production capacity requirements agreed with VLS.

In preparation for final VLS SQD process validation audit, Supplier is expected to conduct internal trial runs to set up and fine tune its manufacturing process, and to keep VLS informed on that planning; at VLS SQD discretion, VLS can request to attend supplier internal trials.

Supplier shall perform its own internal process audit and shall achieve manufacturing process qualification before VLS official process audit and Run-at-Rate, bearing in mind the final deadline for VLS process audit and Run-at-Rate date. Only upon successful supplier internal qualification, VLS will proceed to its own validation of the manufacturing process at Supplier premises, during or after a Run-at-Rate (VM-SCM 403 & VF-SCM 403c)

The full capacity should be in place at Supplier's shop floor and at its sub-Supplier's not later than the Run-at-Rate date. Any deviation from this requirement must be agreed in writing by VLS.

Prior to PPAP and initial samples submission to VLS, Supplier must have its manufacturing process qualified by a formal process audit and a Run-at-Rate conducted by VLS SQD. Until then, the delivery of produced components to VLS plants is not allowed unless specifically requested in written by VLS program buyer.

2.2.4 Production Part Approval Process (PPAP)

The full PPAP package shall be submitted to the VLS SQD representative. Supplier shall refer, at all times, to the revision of the Automotive Industry Action Group (AIAG) PPAP Manual valid at the time of the submission.
Supplier shall submit the full PPAP package for components with released drawings; a copy of these drawings (or at least an indication of the part number and suffix) shall be included into the submitted package.

Supplier shall also ensure that all requirements are met prior to PPAP submission to VLS, including VLS approvals for any change request.
Supplier is responsible for all its own sub-Supplier PPAP submissions and approvals, including those suppliers directed by VLS / OEM Customer. Supplier should contact the responsible SQD to determine PPAP level of requirements.

Supplier shall submit all required PPAP documentation as per procedure VF-SCM-401d PPAP Management.
Supplier is authorized to deliver parts to VLS only after receiving full PPAP approval.
Supplier will be notified by VLS SQD in case an interim PPAP is accepted.

2.2.5 Packaging and Logistics

PACKAGING AND MATERIAL HANDLING:

Supplier shall ensure that the packaging is suitable for the product and conforming to Varroc's "Global Supplier Packaging Standards", and is formally approved by VLS.

Labels shall conform to VLS Supplier Labeling Standards.

VLS Packaging Information Collection System (PICS) shall be utilized by the Supplier to obtain the VLS approval. Supplier shall submit the "approved" Varroc 1121 form as part of the PPAP package, based on the container selection, container size, container density and overall design, to ensure VLS plant requirements are met.

All packaging should also comply with appropriate health and safety, environmental and other legislative requirements.

Supplier is responsible for the design and the development of the serial packaging so as to fit to all variants and design levels/suffixes of the sourced parts. Supplier shall ensure that parts integrity are maintained and are sufficiently robust to withstand shipment with arrival on time to the final point of use without damage.

At VLS discretion, VLS reserves the right to design, develop and purchase returnable packaging for use by suppliers.

For additional details, please refer to: **VS-SCM-413c Supplier Packaging Standards**

PRODUCT IDENTIFICATION:

Component identification and packaging standard label shall be agreed by VLS and its suppliers during APQP.
For additional details, please refer to: **VS-SCM-413a Supplier Labeling Standards**

TRANSPORTATION:

VLS standard process is to manage all inbound freight to VLS offices, warehouses, and manufacturing locations through VLS nominated carriers. Shipping Instructions (Routing Instructions) for all serial part shipped to VLS locations are provided to all suppliers including, but not limited to, carriers to use, account numbers (if applicable), weight breaks, shipping days, documentation requirements, delivery address, etc…

Any deviation from the routing instructions, without prior approval from the VLS receiving facility, may result in delays and chargeback to Supplier. In the case of special transport requirements (for instance paint or chemicals), Supplier shall ensure clear communication of the required inter-storage and transport requirements, prior to shipment.

CUSTOMS and COMPLIANCE:

Supplier is always responsible for providing complete and accurate documentation, supporting documents for preferential duty and/or treatment under the applicable FTA and/or other Government programs.

In addition, Supplier may be asked for Certificate of Origin/Affidavit of Manufacture, Commercial Invoices, Packing List, and Bill of Lading.

The Incoterms applicable rules, as indicated in VLS Purchase Order (PO), or other written agreement between VLS and the Supplier, should also be referenced on all Commercial Invoices and International shipping documents. Supplier should use the designated VLS Broker as instructed.

Supplier is responsible to ensure that each product, or it's container, is marked according to the regulations of the exporting and importing country.

All questions regarding customs and compliance should be addressed to local MP&L specialists.

2.2.6 Manufacturing Process Review

In case of quality issue, on potential or identified risk, VLS supply chain team (alone or accompanied by VLS customer representatives) may conduct a systematic and sequential review of Supplier manufacturing processes, at Supplier facilities or at sub-suppliers if required.

The format of the review may be the same as that of a customer to VLS, or VLS´s own format, as determined by the Supply Chain team.

This review may also be completed as part of the VLS quality planning and/or for a significant product or process change.

2.2.7 End of Life Vehicles (ELV) / International Material Data System (IMDS) / Banned and Regulated Substances (BRS)

Supplier is required to provide information on the raw materials used in its components supplied to VLS facilities.
Supplier shall be versed in and follow regulations including any subsequent update and decision.
Within the next list of regulations and registration systems, those applicable in the country of component production and applicable in the country of delivery should be considered and respected:

- European Directive 2000/53/EC "End of Life Vehicles" about the content of heavy metals (Cadmium (Cd), Chromium VI (Cr VI), Mercury (Hg), Lead (Pb))
- Latest Commission Decision "Amending Annex II of Directive 2000/53/EC"
- European Directive 2003/11/EC "Amending for the 24th time Council Directive 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations"
- GADSL reference list ("Global Automotive Declarable Substance List") from which supplied components should be verified
  The GADSL reference list is accessible at: http://www.Gadsl.org
- Information on IMDS (International Material Data System) declaration, whenever the supplied component contains declarable substances included on the GADSL reference list https://www.mdsystem.com
- Commission Decision 2003/138/EC "Establishing component and material coding standards for vehicles pursuant to Directive 2000/53/EC"
- REACH Regulation EC/1907/2006 "Registration, Evaluation, Authorization and restriction of Chemical substances"
  REACH Automotive Industry Guideline available at: http://www.acea.be/reach
  Supplier should provide needed documents to ensure and demonstrate the compliance with every REACH implementation step and related deadline.
  For each supplied component, Supplier should identify the related REACH category (substance, preparation, article) and send the documentation as defined by REACH
- If Supplier Legal Entity is located outside of European Community and Supplier sells substances, preparations or articles to VLS premises located in Europe, Supplier should nominate a unique European Representative for registration
- European Directive 1999/5/CE of the "European Parliament and of the Council of 9 March 1999, on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity"

- Commission Directive 2004/104/EC adapting to technical progress Council Directive 72/245/EEC relating to the radio interference (electromagnetic compatibility) of vehicles and amending Directive 70/156/EEC on the approximation of the laws of the member states relating to the type - approval of motor vehicles and their trailers
- Conflict Minerals (Wall Street Reform and Consumer Protection Act) - Information required to report to the SEC if any products contain minerals defined as "Conflict Minerals."
  For more details see VLS SSOW document and www.responsiblemineralsinitiative.org

Supplier shall ensure that all components and materials supplied to VLS comply with current environmental legal requirements and specific End of Life Vehicle (ELV) requirements.
To ensure compliance with the various legal and customer requirements, VLS Supplier shall report information on materials within its respective components by submitting relevant data to IMDS data base.

Supplier shall provide evidence of the approved ELV/IMDS data to VLS as soon as possible upon award of new business, and in any case, within the PPAP package. Submission and conformity of required ELV/IMDS data is mandatory for final PPAP approval copy of the VLS approved IMDS submission along with acceptance status which is to be provided to VLS SQD.

Supplier may be required to resubmit the IMDS information based upon change of revision level/suffix, mass, material or substance content.

Varroc IMDS ID number is: **123904**.

The Supplier shall fulfil the prohibitions of the GADSL and declare substances used in its products by sending an IMDS material data sheet with respect to the IMDS recommendations of the IMDS Steering Committee published on the EDS internet pages.

Notwithstanding this list, Supplier is required to remain aware of any update or new applicable Directive or Regulation (ROHS evolution, other Directives, etc…).

Supplier shall consider every aspect of the component or assembly or material delivered to VLS, and shall also investigate all sub-Supplier components, processes, raw materials, lubricants, coatings, paint and chemical constituents, etc…

It is Supplier's responsibility to ensure that its sub-suppliers report all materials via IMDS database and to collect adequate acceptances.

2.2.8 Documents & Product Samples Retention

Supplier shall retain documents and product samples for the required time length according to the OEM requirements for the program. Components used on multiple programs shall abide by the most stringent OEM documents and product samples retention requirements.

Supplier shall retain a master sample from each activity, die, cavity, pattern, etc… for the same period as serial part approval records, in addition to new master sample produced for the same component number subject to VLS PPAP approval.

The master sample shall be identified as such and shall show PPAP submission reference and VLS approval date.

2.3 Tooling Management

Suppliers shall have an established and proven system to ensure effective and efficient management of production tools (i.e. molds, production equipment and systems) and measuring tools (i.e. fixtures, jigs and gauges) with their associated documents.
Supplier should have available all documents related to tooling design. Examples include and not limited to the 2D and 3D.

Supplier Tooling Corporate Guidelines should describe relevant rules for monitoring and verification build progress for tools, fixtures, jigs and gauges from engineering phase, through trials, until validation and shipment. Such requirements are also applicable if a sub-Supplier is part of that process.

All measuring jigs and gauges shall be manufactured using best practices used for tool industry.

Supplier, and assigned tooling suppliers, must assume full responsibility for the functional capability of the tools, jigs and gauges manufactured for VLS.

Evidence of procedure execution shall be made available upon VLS request. All tooling shall be permanently marked so that the ownership of each item is visible (whether OEM, VLS, or Supplier) with relevant tool tag(s).

Supplier shall establish preventive/predictive maintenance procedures on all tooling.
Preventive/predictive maintenance schedules, tool history records and number of shots shall be documented and available for review upon VLS request. It is recommended to have Tool Kardex file.

Supplier is responsible for collecting VLS consent before modifying or disposing of any tooling aimed to manufacture components for VLS through PIC SCR process.

These requirements are applicable for the entire project lifetime, including service parts.

Upon VLS request, Supplier shall grant access to audit tool documentation (including invoices).

Supplier shall perform a tool inventory of all VLS owned tools (active and inactive) in Supplier's possession. The tool inventory shall be submitted on annual basis to VLS.

2.4 Sub-Supplier Management

Supplier shall require from its own sub-suppliers compliance with the requirements described in this Manual. Such evidences of sub-Supplier compliance shall be provided to VLS upon request.

3. Pre-Serial and Serial Production Conformance

3.1 Compliance Certification

Upon VLS request and without undue delay, Supplier should provide process or product compliance documentation, and/or compliance to Safety and/or legal requirements.

In specific cases or for a defined purpose, VLS may ask for a certificate of conformance, a certificate of analysis and/or a capability report, to accompany shipments of specified components or materials.

These certificates and reports should contain the actual results of physical parts testing and/or measurements specified in contract.

SPC data requirements should cover, at minimum, product special control characteristics defined on specifications / drawings.

3.2 Product Traceability (Batch/Lot)

Supplier shall have an effective batch/lot definition and traceability procedure. The shipper number will be linked to the batch/lot traceability procedure in such a way that the delivered products can be traced back to the raw material, purchased components or the production date and shift.

Unless otherwise approved in written by VLS Supply Chain representative, a batch/lot shall consist of one [1] shift, or eight [8] hours of production, whichever is smaller.
VLS reserves the right to specify with the supplier the minimum and maximum batch/lot size, should this rule not being compatible with supplier manufacturing specificity or supplier technology.

The batch/lot definition shall reflect all significant processes influencing the component/material, with the shipping batch/lot number reflecting the last added value operation.

Supplier shall ensure that its batch/lot traceability system maintains a foolproof integrity throughout the entire extended supply chain, including raw material and purchased components/products.

3.3 Statistical Process Control

Statistical Process Control (SPC) is mandatory for significant and critical characteristics as defined by VLS or by Supplier internal requirements. Supplier shall maintain minimum required statistical indices (process capability) for all product significant characteristics throughout the product life cycle.
Process capability can be conducted with both variable and attribute data.

- Requirements for variable statistical indices (SPC) to be calculated, using at least fifty [50] individual samples per cavity :
  - **Ppk > 2** at program early approval
  - **Cpk > 1.67** for Significant and Critical Characteristics & continuous production conformance
  - **Cpk > 1.33** for other characteristics

  Also , Supplier must apply automotive SPC AIAG handbook to comply with OEMs expectations.
- Containment activities (typically additional controls or measurements) must continue until such time that the process C_{pk} demonstrates acceptable process capability.
- Any deviation to these requirements, together with attribute feature control, should be concurred and documented by Product Development Team through ESER submission and its approval by VLS.
- Evidence of process capability should be retained at Supplier's manufacturing location.

Note: if supplier fails to reach the required capability level, it is therefore required to have a 100% inspection activity in place.

Documentation of process capability should be made available to VLS representatives upon request.

3.4 Appearance requirements

Appearance requirements will be annotated on the engineering drawings.
The VLS Appearance Approval Report (AAR) form and any additional guidelines may be found on Varroc Supplier Portal. AAR must be approved by VLS Engineering and/or Customer.

3.5 Change Management

3.5.1 Temporary Changes / Deviation for Non-Conforming Material

It is the policy of VLS not to accept products/components that do not meet the requirements of the applicable drawings and specifications.
Requests for concession/deviation on a non-conforming product shall be submitted to VLS plant for review, so as to possibly obtain VLS Quality written approval prior to any shipment.
Any such request shall be accompanied by a thorough explanation of the root cause for the identified non-conformance, the possible risks induced by this non-conformance, the actions taken to recover the root causes and actions to prevent recurrence.
It shall also include the date of quality compliance guaranteed products availability, with the confirmation of its traceability and the method of identification.
For a temporary change bound by a duration or a quantity, Supplier shall fulfill and submit to the appropriate VLS SQD contact the VLS Deviation form that will further generate a Temporary Change (TC) number to approve and track the change.

For additional details, please refer to: **VF-SCM-401e Deviation Submission Report**

If the introduced change cannot contribute to the return to the original definition, Supplier has to submit a permanent change request (SCR) through Varroc portal.

The TC number should be placed on all documentations and dunnage labeling associated with the affected component, if deviation is accepted by VLS.

Temporary Change is granted for a period of three [3] months and can be extended to a maximum of six [6] months.

VLS reserves the right to charge back all costs incurred as a result of a Supplier's quality or delivery failure.

3.5.2 Process or Product Changes

In accordance with the IATF 16949 standard and VLS Global Terms and Conditions (GT&C), Supplier cannot implement any change on a serial product (including the packaging) or on a serial manufacturing process, without prior written approval from the VLS relevant authority.

A layout change of a manufacturing process or a relocation of the manufacturing process (internally and externally of the premises) is considered as a change which must be communicated to, and authorized by, VLS prior to its implementation.

In case Supplier intends to apply a change on manufacturing process or product, or even on its packaging, and prior to its implementation, Supplier must submit a Supplier Change Request (PIC SCR) on Varroc supplier portal.
This document shall be uploaded on the document tab dedicated for PIC SCR.

For additional details, please refer to: **VF-SCM-416 Supplier Change Request / Deviation Form**

Along with the change request and the deviation form, Supplier has to specify the list of documents and reports that are intended to be submitted to VLS - upon revision, VLS SQD may request additional information or requirements.

SQD will acknowledge and proceed with the SCR internally, and, once approved by VLS Cross Functional Team (CFT), will forward the approved SCR to the Supplier.
From that moment on, Supplier has the authorization to implement the change, yet before delivering parts in serial production, Supplier must get PPAP approval (if applicable) from VLS SQD.

The first approved shipment of components after the implemented change, shall be prominently labeled with the SCR number. A link to the SCR module in **EnterProj** can be found on the VLS Supplier Portal: https://supplierportal.Varroclighting.com

In the following cases Supplier PPAP is mandatory:

- A part number revision / engineering (Suffix) change
- Any change that requires a revision of the Process Control Plan
- Product modified by an engineering change to customer specifications, design/customer drawing, or material
- New production site (including the change of manufacturing plant within the Company)
- Change of production layout
- Transfer or relocation of production line
- Production was interrupted for six [6] months (for service parts, each case is to be managed separately) or Tooling was innactive more than one [1] year
- Packaging change
- Any change in approved E BOM from VLS Electronics team
- Any change in product design-standard component
- Change at sub-Supplier
- Material change

These requirements are mandatory for the whole supply chain.

For sub-suppliers, change management is subject to the same control requirements as those of VLS direct suppliers.
All changes should be identified visually with specific label, in a format agreed by local VLS production site.

3.6 Requalification

A layout inspection (dimensional and functional/material testing requirements – as per IATF chapter 8.6.2) shall be performed annually.
Each component / each cavity shall have one [1] sample accompanied with its dimensional report.

As part of this process, Supplier shall update the PPAP document files to include new dimensional/functional layout data and a self-certified PSW (Part Submission Warrant) cover sheet.

A full dimensional/functional layout inspection shall include all significant characteristics and all key functional dimensions/specifications (vibrations, heat test, light performance output, etc…).
This document shoud be filed with the original PPAP and associated samples should be archived.
Upon request by VLS representative, or an authorized third-party, Supplier shall make the document available within twenty four [24] hours.

Requalification plan ("Layout inspection") shall be included in the control plan and PPAP records**.**

Should any deviation be detected during the requalification process, Supplier shall inform VLS immediately.

3.7 Supplier Concern Management

This section outlines Supplier's responsibilities as a result of non-conforming product due to Supplier's fault.

Upon detection by VLS of non-conformity, or suspicion of non-conformity in a purchased component, or a delivery issue, VLS will alert the Supplier immediately through a Quality Reject (QR) or a Delivery Issue (DI).

Following such notification, the Supplier shall immediately and without undue delay:

1 – Inspect and sort all suspected parts at any defined location (Varroc, Supplier, Varroc's Customer, parts in transit or other). All costs incurred will be at the Supplier's expense.
2 – Replace those parts with secured batch(es) in the shortest period possible, through the fastest delivery method available, at his own expense, if VLS lines risks disruption or interruption due to lack of parts.
3 – organize a third-party sorting at any impacted locations specified by Varroc, at the his expenses
4 – Secure its manufacturing process, implementing corrective actions to permanently avoid the problem, addressing the root cause and preventing recurrence.

Hereafter VLS requirements in terms of timing and activities which Supplier shall comply with:

- define and put in place the containment actions within twenty four [24] hours.
- identify the root cause(s) and define the corrective action(s) within five [5] working days.
- implement the defined corrective action(s) within ten [10] working days.
- validate the efficiency of corrective action(s) and close the issue within thirty [30] working days.

Concern analysis approach concluding on the corrective action plan shall apply the 8D Report or PDCA/FTA standard.

Incident/Concern definition:

a- **Supplier Quality Incident**: quality event caused by one or several non-conform components detected by VLS or by Customer, on a specific problem/failure mode of demonstrable Supplier responsibility. It is managed through QR (Quality Reject) in Enterproj system.

b- **Supplier Logistic Incident** : any deviation to VLS requirements regarding time, quantity, documentation, packaging or labeling. It is managed through DI (Delivery Issue) in Enterproj system.

c- **Recurrent Incident**: Non-conformity of any of above types detected with the same root cause of an earlier incident deemed closed after implementation of the corrective actions.

VLS Quality, Logistics or Purchasing may require its suppliers to implement independent containment activites if the severity of the issue impacts product performance or integrity.

VLS reserves the right to request Controlled Shipping Level 1 or 2, as per the following definition:

- **Controlled Shipping Level 1 (CSL1)**: further to a request from VLS, and due to the incapability from Supplier to secure deliveries to VLS, Supplier shall implement a quality wall (CSL1) in addition to the pre-existing sorting activities in production. The CSL1 shall be operated by the Supplier workforce in a dedicated zone out of the production line, and in compliance with work instructions previously validated by VLS.

The sorting/control activity shall be conducted by a trained and authorized personnel and shall be monitored on daily basis. Supplier shall deliver to VLS weekly reports of the CSL1 activity, and upon request by VLS, daily report. By applying a specific "CSL1" identification on each packaging, the Supplier guarantees the conformance of parts delivered to VLS. The cost for CSL1 activity will be borne by the Supplier.

Shall the CSL1 activity prove to be inefficient in protecting VLS and/or customers, a CSL2 will be requested.

- **Controlled Shipping Level 2 (CSL2)**: in addition to the CSL1 activity, Supplier has to organize and put in place an additional quality wall (CSL2) implemented in an external location and operated by an external company validated by VLS, applying work instructions coherent to those defined in prior CSL1 activity.

CSL2 costs will be borne by the Supplier. The external company shall deliver daily reports of the CSL2 activity to both VLS and Supplier.

- **Exit from CSL1 and CSL2**: VLS shall decide on the removal of the CSL1 and/or CSL2 activities once the exit criteria (as per the definition inserted in the CSL notification letter) are met and will notify Supplier accordingly.

3.8 Penalties and chargeback

Upon establishment of Supplier responsibility on a quality or a delivery concern/ incident, VLS will notify the Supplier with an official claim.

Unless its responsibility is waived by facts and evidence, Supplier remains liable for all direct and indirect damages and losses, including lost profits caused by Supplier's non-conformity to contractual requirements, including requirements provided in this document and applicable regulations.

Here below the main activities (non-exhaustive list) for which Supplier will be charged with administration costs (penalties):

- **Supplier Incident / Concern processing:**
  - For Non-Conformance on pre-serial part(s) approved under deviation by VLS and detected during project development (before PPAP).
  - For failed serial parts detected at VLS.
  - For failed serial parts detected at Customer.
  - For failed serial parts detected with recurrence on root cause.
  - For serial parts delivery failure (wrong quantity, wrong components, packaging/labeling issue or time delay related).

  Administration cost (fees): includes the non-conformity management, the process pre-analysis and the required investigation tests (laboratory or other), the immediate sorting activity with VLS internal personnel, or VLS appointed external company, identification and segregation of failed/suspected components and finished products, etc…

- **Supplier readiness for process audit / run-at-rate:**
  - For failed audit due to lack of Supplier readiness or with a score below 80% (requirering a follow-up audit by VLS SQD) or due to Supplier incapability to prove full required capacity.

- **Supplier failure to respect defined rules and agreed commitments:**
  - Supplier introduction of non-authorized change on its process/product tool/manufacturing location.
  - Supplier disrespect of committed PPAP readiness deadline due to its own responsibility (before VLS Run-at-Rate)

Other main causes for Supplier's chargeback (direct costs) are in particular:

- Sorting/rework and transport extra activities. Amount defined on the basis of invoices/actual measurement of time spent, related to these activities (including VLS, third-parties and Customer invoices).
- VLS production line stoppages: all costs induced by line stoppages.
- Customer production line stoppages: all costs, including Customer full rate invoices.
- Late material delivery (logistic concern).
- Premium freights due to Supplier components late delivery or quality or quantity delivery issue.
- Extra costs for sorting/rework at Customer plants (if Supplier component quality is involved).
- Cost for managing/scrapping of finished products (including the value of the finished product itself) impacted by faulty components with Supplier responsibility.
- Cost for rework/replacement of failed Supplier components at customer/OEM car park.
- Missing or improper documentation for delivered parts provided by Supplier (including customs documentation).
- Internal or external laboratory tests performed to identify the problem on failed parts/components.
- Warranty return and recall campaign - Customer invoice.

For further concerns and costs details, refer to **Appendix #2** (VLS reserves the right to update every 2 years). VLS notifies Supplier in writing about an update. An update shall enter into force as of the date of notification if Supplier does not submit written objection to such an update within 10 working days from such notification; if such an objection is submitted and accepted by VLS- the previous rules remain valid.

3.9 Supplier Monitoring and Development

VLS constantly monitors Supplier performance to ensure the continuous conformity to VLS and Customer requirements.
Supplier development, including action plan definition as part of continuous improvement, is part of this process.
Supplier monitoring is performed on a quarterly basis in a form of a Supplier Score Card.
The criteria taken into consideration are : quality, APQP/PPAP, logistic, commercial performance, QMS status and process audit result (VF-SCM-415a).

3.10 Supplier Warranty Returns / 0 km return Cost Reduction Program

Standard Warranty requirement is 36 months unless a longer period is required by OEM Customer. In such case, Supplier will be notified by VLS Purchasing during sourcing phase shall a longer warranty period be applied.

Supplier is required to develop an aggressive warranty returns / 0 km return reduction program aiming at zero [0] claim target.

Activities to be included are:

- Assignment of a warranty/0 km “champion” to act as a single contact for any issue.
- Analysis of any warranty/0 km issue (quantity of rejects and cost).
- Timely implementation of corrective actions or process improvements to lower costs.
- Use of “lessons learned” approach to ensure quality issues are taken into account as from the design phase of future programs, and development of TGW (“Things Gone Wrong”) list.

VLS and Supplier shall jointly collaborate in problem resolution. In case of dispute over warranty / 0 km responsibility, both parties agree to recourse to an independent laboratory (ISO 17025 certified) chosen by VLS, and to accept such laboratory report as binding.
Costs of these analysis shall be supported by the identified faulty party (the party that is deemed responsible for the warranty / 0 km infringement).

4. End-Of-Life (EOL), Service Parts

The End-Of-Life (EOL) period begins when the serial production for OEM products is terminated and the project starts its "service parts" phase.

Supplier is responsible for the supply of original equipment service parts to VLS plants for fifteen [15] years period after End Of Production (EOP) and at the serial production price, unless otherwise agreed in Sourcing Nomination Letter (SNL).

It should be noted that EOL must not be confused with ELV mentioned in section 2.2.7.

Service parts are to be produced from production tooling, unless otherwise approved by VLS.
Regular preventive maintenance activities are required to maintain production capability.
Service parts have the same requirements as production parts unless otherwise directed by VLS, therefore all produced and delivered Service parts will comply to all specifications.
All requirements for regular serial parts are applicable also for service parts.

If tool has not been used for a period greater than one year, requalification by PPAP procedure must be performed.

All translations must be approved by VM-SCM-417 Document Owner

Process Owner: SUPPLY CHAIN MANAGEMENT

See VG-Q-501a on the **Varroc Integrated Management System (VIMS)** website for Owner's Name and ADID (Active Directory Identification)

Record of Revision

Date	New Revision	Change Description
2019-11-18	01	Initial Release
2020-11-25	02	Annual Review
2021-04-07	03	Global Manual updates
2021-06-30	04	Changed link to Supplier Quality Portal

Appendix #1

RASIC

RASIC

R	(R)esponsible : Responsible to perform, coordinate, or prepare
A	(A)pprove : Has final say and accountable for decision or document
S	(S)upport : May support by performing, coordinating or preparing, subject to mutual agreement and availability
I	(I)nformed : Must be informed or receive pertinent documents
C	(C)onsulted : Must be consulted before activity, decision or document is made or completed

	Customer	Tier 1 Sup: VARROC	Tier 2 Sup:	Activities description
1 - PRODUCT/PROCESS GLOBAL STUDY				
RFQ (Request for Quotation)				
1: Specifications:				for the product of the tier 2 supplier
- Product	R	S	C	specifications applicable to the project (functional spec., technical spec., deployment of the service, etc.)
- OEM industrial requirements	R	S	C	production volume, manufacturing / assembly site, assembly constraints in plant, etc.
- Logistical requirements	R / A	R	C	definition of packaging (type, size, number of products, etc.) and logistical conditions (mode of transport, delivery frequency, delivery sites, etc.)
2: Definition of QCDP targets:				for the product of the tier 2 supplier QCDP targets are communicated by OEM to suppliers. These targets become objectives after negotiation and are made contractually binding in the appointment letter
- Quality and reliability	R	I	I	ppm km0 (OEM plant) and block phenomenon
- Economical	R	I	I	
- Delivery	R	S	I	OEM: planning and milestones of the vehicle Project Tier 1 supplier: planning of the assembled function
- Weight	R	I	I	product weight
3: Deployment of QCDP objectives				demonstration by the tier 2 supplier that objectives will be achieved.
- Situation in mass production phase:				
. ppm km0	A	I	R	communication of the QCD results obtained on similar products in mass production and processing by the supplier of the results obtained with other customers.
. Warranty	A	I	R	
. cost	A	I	R	
. logistics	A	I	R	
. weight	A	I	R	
- Action plan / eradication	A	S	R	when the difference between the objectives to be achieved and the mass production results obtained is significant, demonstration by the Tier 2 supplier of how this requirement is taken into account in its study
4: Production of the development quality plan	A	I	R	definition and planning of the activities implemented by the tier 2 supplier to guarantee the quality of the project.
Supplier Choice				
5: Supplier selection:				
- Tier 2 supplier	R			the tier 1 supplier provides technical expert assistance
- Raw material supplier	A	I	R	
- Toolmakers	A		R	technical expertise of the toolmaker is taken into account under QCD constraints
6: Officialization of supplier selection	R	I		dispatch of the appointment letter to the tier 2 supplier
2 - PRODUCT/PROCESS DETAILED STUDY				
Input data				
7: Project organization	A	I	R	
8: Approval of QCD objectives by the supplier	A	I	R	signature by the tier 2 supplier to accept the technical, financial and quality commitments associated with the nomination letter
9: Production of the reference schedule	A	S	R	reference schedule produced by the tier 2 supplier is consistent with the vehicle schedule. Once approved by OEM it becomes contractual between OEM and its supplier
Product design				
10: constraints taken into account:				for the product of the tier 2 supplier:
- Vehicle design	A	S	R	
- OEM industrial constraints	R	S	A	the tier 2 supplier takes the assembly conditions stipulated by OEM for its product into account
- Tier 1 industrial requirements	A	S	C	manufacturing / assembly site, assembly constraints in plant, parameter setting, ...etc.
- Supplier product	A	I	R	definition of the recommendations for use of the tier 2 product concerned: environmental, storage, handling, maintenance, repair, etc. constraints
- Standardization	R	S	S	decision: to standardize a product for several applications
- Environmental requirements	A	I	R	compliance with environmental requirements: banned or regulated substances (MDS) - recycling (marking, etc.) / etc.
11: Technical orientation	A	I	R	selection of the solution to be used (concept, technology, etc.) for the product of the tier 2 supplier when several responses to the input data exist
12: Implementation of Product FMEAs	A		R	product FMEA implemented on the basis of a functional analysis or the functional specifications for the product of the tier 2 supplier

13: Identification of special characteristics	A	C	R	Identification of Safety and Regulation characteristics for the tier 2 supplier product. noted on drawings, monitoring plans, etc
14: Allocation of volumes / tolerances:				
- OEM requirements	R	I		definition of the volume allocated and the tolerances to be complied with, these being consistent with the geometric architecture of the area and its objectives (flush, gap, etc.) and taken into account in drawing for the tier 2 supplier product.
- Interface requirements	A	S	R	Tier2 supplier is responsible for interface plan and connectics. Tier1 supplier must adapt to this plan and connectics to ensure mountability of the driver and waterproofness of the complete lamp
16: Checking of the design:				
- Calculation and simulation	A		R	all tier 2 supplier activities conducted to confirm that the product study complies with requirements.
- electronic interface				See <Product Design RASCI>
- Design review (Grade review)				See <Product Design RASCI>
17: Product validation plan:				for the product of the tier 2 supplier:
- Production				See <Product Design RASCI>
- Management of implementation				See <Product Design RASCI>
18: Production of the product parts list (electrical BOM)	A		R	production of the parts list of the product concerned for the tier 2 supplier's product
19: SIGNE documentation	R			
Process design				
21: Design of production facilities:				for the product of the tier 2 supplier:
- Process design	A		R	layout diagram of production facilities on the site and schematic representation of the process flow (flow chart)
- Process FMEA	A		R	implementation of process FMEAs on the different manufacturing operations identified on the flow chart
22: Design of inspection facilities	A		R	identification and design of the specific inspection facilities required to guarantee the quality of the tier 2 supplier's product (production, final inspection, laboratory, etc.)
23: Packaging design:	A	A	R	for the product of the tier 2 supplier:
- Packaging and logistics FMEA	A	A	R	implementation of the FMEA for the packaging and logistics defined.
24: Production of facilities:				for the product of the tier 2 supplier:
- Approval	A		R	planning of installation up to approval of production facilities and equipment
- Inspection and tests	A		R	planning of installation up to approval of inspection and testing facilities
- Specific packaging Management	A	A	R	Tier 2 packaging should be checked and approved by the Tier 1
25: Recommendations for use of the product:				for the product of the tier 2 supplier:
- By the tier 2 supplier	A	I	R	Recommendations for use of the product must be given by Tier 2 to Tier 1: Identification (should enable traceability to display on production line), storage, handling, gripping, assembly, etc.
- By OEM	A	S	R	recommendations: storage, handling, gripping, disassembly, assembly, etc.
Launch of tooling				
26: Implementation of the production run plan	A		R	commitment of the tier 2 supplier to industrialization objectives (operators, product, facilities and packaging) at the main milestones of the vehicle project checking completion of these objectives at each of these milestones
28: Industrial feasibility commitment	A	I	R	confirmation by the tier 2 supplier of its capacity to comply with the QCD objectives required by OEM
29: Launch of tooling	A		R	
3 - IMPLEMENTATION AND VALIDATION OF MASS PRODUCTION FACILITIES				
30: Production of facilities:				for the product of the tier 2 supplier:
- Production	A		R	monitoring of progress on implementation of production facilities and equipment
- Inspection and tests	A		R	monitoring of progress on implementation of inspection and testing facilities
- Specific packaging	A	A	R	Tier 2 packaging should be checked and approved by the Tier 1
31: Progress of the production run plan	A	I	R	checking compliance with the production run plan objectives at the main milestones of the vehicle project. Tier 1 to be informed of all changes to delivery schedule or forecast
30: Production of facilities:				for the integration of the product at the tier 1 supplier:
- Inspection and tests	A	R		Only lighting on of every LED is checked, function of the driver according vehicule command not checked
4 - PRODUCT / PROCESS VALIDATION AND APPROVAL				
32: Models and prototypes:				for the product of the tier 2 supplier:
- Statement of requirements	R	R	A	definition of OEM requirements (prototype waves planned, quantity of products, representativity required, global budget, etc.) + definition of tier1 supplier for its own needs for prototypes
- Quality assurance implementation	A	I	R	implementation of the monitoring plan
- Launching	R	R	A	product ordering (definition, delivery time, quantity, cost, etc.)
- Implementation	A	A	R	compliance check implementation (dimensional, functional, etc.) and delivery of the products ordered
33: Mass production product:				for the product of the tier 2 supplier:
- Validation of definitive tooling	A	S	R	analysis of the initial products produced using definitive tooling
- Tuning	A	S	R	all activities designed to ensure "fine" tuning of the product and its manufacturing process
- Quality assurance implementation	A	I	R	implementation of the try-out and mass production monitoring plans
- Implementation of capability studies	A	I	R	definition by the supplier of the plan for deployment of capability studies
- Approval of mass production products	A		R	approval by the tier 2 supplier of its product (internal Initial Samples / PPAP)
- Implementation of pre-production audits	A		R	completion of the pre-production audit of the supplier and that of the customer (if necessary) definition of the activities to be carried out during production ramp-up to compensate for the lack of robustness in the manufacturing process
- Capacity commitment	A	I	R	guarantee of tooling capacity in relation to reference volumes
- Supplier manufacturing approval	A	I	R	approval by the customer of the product and its process (Initial Samples / PPAP)
"Purchasing" activities				
34: Negotiation and financial commitment:				for the product of the tier 2 supplier:
- Design cost	A		R	definition and negotiation of the budget for product engineering, logistics, industrialization, etc.
- Prototype and mass production part price	A	I	R	specification of the financing and negotiation rule under QCD constraints, annaul reduction negotiation and application date negotiated between OEM, the tier 1 supplier and tier 2 supplier
- Financing of "end of mass production" products	R	I	I	
- Cost of mass production prototype and specific tooling	A		R	specification of the financing and negotiation rule of the tooling amount under QCD constraints
- Cost of capacity facilities	A		R	specification of the financing and negotiation rule of the tooling amount under QCD constraints
- Specific packaging	A	A	R	Tier 2 packaging should be checked and approved by the Tier 1

35: Order:				for the product of the tier 2 supplier:
- Prototype parts (DV, VP, TT, PP)	C	R	A;S	
- Mass production parts		R	A;S	
- Afte-Sales parts	R	I	I	in accordance with After-Sales strategy
36: Production of the supply contract	R	I	I	commitment of the parties through a supply contract stipulating the terms of transfer of tier 2 supplier products
37: Change management:				for the product of the tier 2 supplier:
- Product	A	A	R	Tier1 must be consulted prior to every design change to assess impact on lamp system and assembly process
- Process and manufacturing transfer	A	I	R	
38: QCD reporting during development:				for the product of the tier 2 supplier:
- Product	A	I	R	formalization of the QCD status of the product
- Progress plan	A	I	R	management of the QCD and logistics progress plan to ensure convergence towards objectives
39: QCD management during mass production:				for the product of the tier 2 supplier:
- Performance monitoring	A	I	R	Productivity plan
- Progress plan	A	I	R	Management of the plan to improve the Quality, Financial, and Logistic performance of the product: Analysis of results, opportunities for improvement, planification and implementation of actions
40: Capacity commitment & Flexibility	R	A	C	
"Quality" activities				
41: Management of quality problems in OEM plant - Analysis 1st level	A	R	S	
41-2 : Management of quality problems with a Tier 2 responsibility	A	I	R	all activities connected with km0 quality management of the tier 2 supplier's products (ppm, incident, AQR defect): analysis of faulty products, determination of causes, definition and implementation of corrective actions, validation, etc. managed by Tier2 and OEM.
41-3 : Implementation of client's protection from quality incidents (for Tier 2 responsibility)	A	S	R	Tier 1 and Tier 2 to secure the plant (sorting the parts...). Cost to be charged to Tier2 accordind admistrative cost bareme
41-5 : PPM imputation	R	I	I	- The detectable problems will be imputed to the Tier 1 supplier, who is responsible of the headlamp function, according to the control plan - The undetectable problems from Tier 2 will not impact the Tier 1's PPM
41-4 : quality deffect detected in Tier 1 plant (Tier 2 responsability)	A	A	R	Will be managed through SRM system, Tier 2 to provide PDCA/FTA analysis and countermeasure. Cost charged to Tier2 according administraive cost bareme
42: Management of after-sales problems:				for the product of the tier 2 supplier:
- OLV issues	A	R	S	vehicle launch operation (OLV): special monitoring of quality in relation to customers when launching a new vehicle. The OLV requires the supplier to be available and responsive. Tier1 analyses the part in defect and failure responsibility is validated by OEM. Correction action is managed by the responsible tier
- Returns under warranty (Tier 2 responsability)	A	S	R	all activities connected with management of after-sales quality: analysis of faulty products, determination of causes, definition and implementation of corrective actions, validation, etc. : Tier1 analyses the part in defect and failure responsibility is validated by OEM. Correction action is managed by the responsible tier directly with OEM
"MP&L" activities				
Definition of Incoterms / Transportation Responsibility	I	R	A	Clear definition of incoterms to align Varroc and Supplier regarding when and where Varroc takes ownership of supply chain. Varroc needs to insure there will be a proper flow of material to support VES and low inventory levels.
Follow VLS Global Packaging Guidelines (including: Expendable/Returnable, Who designs, Who buys)	I	A	R	Packaging style needs to be defined and approved by Varroc through the PICS web system. Packaging style needs to be confirmed: expendable or returnable. If packaging is expendable the costs needs to be confirmed as part of the supplier piece price. If packaging is returnable the design and procurement responsibility needs to be confirmed as well as the container fleet size.
Customs documentation	I	S	R	Supplier must agree to provide all required shipping and customs documentation (commercial invoice, packing list, etc.) to insure Varroc will be able to efficiently import/export parts as required, perform the part qualification process (certificate of origin, manufacturers affidavit, trace value, etc.), and any other information to support customer or government requests.
Communication via full EDI or WEB EDI	I	S	R	Supplier must agree on engaging in communication with VLS using full EDI plattform or, at least, WEB EDI. VLS will send weekly scheduling agreement releases using such technology. VLS expects supplier to send ASN for every shipment that is initiated.
Scan-to-receive project	I	S	R	Suppliers must engage in the coming "scan-to-receive" project where vendor will create and print the material labels that VLS will use for inventory transactions
Consignment inventory or JIT deliveries	I	S	R	Supplier must engage in consignment inventory program or identify logistics providers in the vicinity of VLS destination plan to perform Just In Time deliveries
MOQ definition	I	R	A	Supplier must setup an MOQ that is not exceeding the volume for 1 week of average VLS consumption

Appendix #2

Penalties and Charge Back

Supplier Incident / Claim processing (Administrative costs)		
	Item	Penalty amount
(a)	Failed pre-serial part(s) detected during project development (Interim PPAP approved before VLS SOP)	200 Euros
(b)	Failed serial part(s) detected at VLS	300 Euros
(c)	Failed serial part(s) detected at Customer	600 Euros
(d)	Failed serial part(s) detected with recurrent root cause	1000 Euros
(e)	Serial parts delivery failure (wrong quantity, wrong components, packaging issue or time delay related)	300 Euros
(f)	Missing or improper documentation for delivered parts provided by Supplier to VLS (including customs documentation)	300 Euros

Supplier readiness for process audit / Run-at-rate audit (Administrative cost + other induced costs)		
	Item	Penalty amount
(a)	Failed audit due to supplier readiness and with a score less than 80% (requirering a follow-up audit by VLS Supplier Quality Development Engineer)	1000 Euros + transport cost + accommodation cost

Supplier failure to respect defined rules and agreed commitments (Administrative cost + other induced costs)		
	Item	Penalty amount
(a)	Supplier have introduced a non-approved modification (by VLS) on its process or its product (Other induced costs: stock management, tests, risk assessment study, logistic management…)	2000 Euros + other induced costs
(b)	Supplier have not respected the PPAP readiness deadline due to its own responsibility (before VLS Run-at-Rate)	1000 Euros for each late week

Other (considering supplier responsibility is demonstrated)		
	Item	Penalty amount
(a)	Sorting/Rework and transport extra activities. Amount defined in the basis on invoices / actual measurement of time spent, related to these activities (including VLS, third parties and customer invoices)	According to real cost
(b)	VLS production line stoppages: all costs induced by line stoppages	According to real cost
(c)	Customer production line stoppages: all costs, including customer full rate invoices	According to real cost
(d)	Premium freights due to Supplier components late delivery or quality or quantity delivery issue	According to real cost
(e)	Extra costs for sorting/rework at customer plants (if supplier component quality is involved)	According to real cost
(f)	Cost of managing/scrapping of finished products (including the value of the finished products itself) impacted by faulty components with Supplier responsibility	According to real cost
(g)	Cost for rework/replacement of failed Supplier components at OEM car park	According to real cost
(h)	Missing or improper documentation for delivered parts provided by Supplier (including customs documentation) with an impact on VLS and Customer production	According to real cost

(i)	Internal of external laboratory tests performed to identify the problem on failed parts/components	According to real cost

Warranty		
	Item	Penalty amount
(a)	Warranty return - administrative cost (Analysis, tests, report to Customer…)	1000 Euros
	Warranty return and recall campaign - Customer invoice	According to real cost