

Supplier Quality Assurance Clauses

Clause 1 – STANDARD REQUIREMENTS:

Terms and Conditions: Suppliers of Optics 1 shall comply with the Quality Assurance requirements identified as applicable on the purchase order and described herein. The requirements of the provisions shall be in addition to all other requirements of Purchase Orders, Work Orders, Letter Contracts and Optics 1 standard Terms and Conditions (SCP-1000000). Compliance with the requirements of the provisions does not guarantee acceptance of products or services and it remains the responsibility of the supplier to comply fully with applicable drawings and specifications.

Quality System: Suppliers shall comply with a Quality Management System (QMS), which assures that the supplier fully satisfies the requirements of the Optics 1 procurement. For high-value, complex procurements that require significant supplier design activity, ISO-9001 is the preferred QMS. For other material procurements, ISO-9001 less the design requirements is the preferred QMS. Calibration services shall comply with ANSI/NCSL Z540.3 and/or ISO/IEC-17025. Where specific QMS requirements are flowed down on the purchase order, they shall take precedence. During performance of this order the supplier's quality system, manufacturing processes, and records are subject to review and surveillance by authorized representatives from Optics 1. The supplier shall develop and maintain documented procedures, operator instructions, process sheets, and test instructions for production, where the absence of such documents could adversely affect quality.

Confidentiality: Supplier agrees not to make use of or disclose to third parties any data, designs, drawings, specifications and other information furnished to it by Optics 1 except for the performance of any Optics 1 purchase order. All Optics 1 order information is confidential between Optics 1 and supplier and it is agreed by supplier that none of the details connected therein shall be published or disclosed to any third party without Optics 1 written permission.

Continuity of Supply: Every supplier is faced with the possibility of production being interrupted by unforeseen circumstances such as power loss or machine breakdown. An interruption in supply may result in an interruption in services or products to Optics 1 customers therefore Optics 1 may request select suppliers to provide a plan for continuity of supply.

Training: The supplier shall ensure that its personnel are aware of the relevance and importance of their activities and how they contribute to the achievement of product or service conformity, product safety and quality objectives. The supplier shall establish and maintain a system for identifying the training needs and providing the training for all personnel performing activities affecting quality. The supplier shall evaluate the effectiveness of this training and shall maintain appropriate records of training and job qualification.

Tooling Requirements: By accepting a contract from Optics 1, the supplier agrees to maintain any tooling, gauges, fixtures, equipment and facilities required to manufacture the contracted products for at least 5 years following the end of production, or as directed by Optics 1 Procurement. Service order pricing parameters should be agreed upon during the production phase, with all changes in writing, and accepted by Optics 1. Optics 1 Procurement will direct storage of the tooling. Maintenance costs of all required items stated above are the responsibility of the supplier unless other arrangements have been documented with Optics 1 Procurement. Suppliers must have preventive maintenance (PM) frequencies established and track tool maintenance.

Supplied Tooling: Upon receipt, the supplier shall inspect for identification and general condition. The supplier shall immediately report damaged, malfunctioning or otherwise unacceptable items to Optics 1 Procurement. Optics 1 furnished tooling & fixtures shall remain property of Optics 1. Supplier is

responsible for the value of any lost/damaged tooling & fixtures, other than normal wear and tear resulting from usage. Optics 1 owned equipment may only be used for the production of Optics 1 orders. Optics 1 reserves the right to audit and inspect Optics 1 furnished property and equipment.

Documentation: Certifications and other documents as required by the purchase order from the prime supplier shall provide traceability to the Purchase Order Number and the Lot Number and Part Number including revision when applicable and be signed and dated by an authorized representative. The purchase order will not be complete and payment may be delayed until all documentation is received. All additional applicable inspection & test reports must be made available by the supplier or their sub-contractor for examination by Optics 1 for a period of at least seven years from the date of shipment and upon request by Optics 1.

Communication: A supplier's official point of contact shall always be the buyer. Technical questions may be forwarded to the appropriate personnel via the buyer. Supplier Quality Engineering may be contacted directly for all issues, concerns or questions related to the quality or conformance of the product or service being provided. There shall be no changes to the technical and/or quality requirements without written authorization from the buyer. Suppliers shall immediately notify the buyer in writing of any known or suspect nonconformance(s) or problem(s) identified by the supplier after products or services associated with this purchase order have been delivered or provided to Optics 1.

Inspection / Testing: Supplier shall perform inspection and/or tests as is applicable to the requirements and specification(s) of the purchase order. Inspection and test reports generated by the supplier must be made available by the supplier or their sub-contractor for examination by Optics 1 for a period of at least seven years from the date of shipment. Submission of inspection / test reports may be required with the delivery of product for applicable purchase orders that include Clause 9.

Supplier Request for Deviation: To receive a temporary deviation from an Optics 1 specification due to an unforeseen nonconformance, the supplier must submit a written Request For Deviation (RFD) to the buyer and/or Supplier Quality Engineer using form QAP-1000010. Optics 1 will consider each RFD which must include detailed Root Cause and Corrective/Preventative Action statements. The supplier must obtain an accepted and signed RFD form from Optics 1 prior to shipping deviated or nonconforming products. A copy of the approved and signed RFD form must accompany all relevant shipments to avoid unwarranted rejection by Optics 1 Receiving Inspection. Unauthorized shipment of nonconforming products to Optics 1 prior to the supplier receiving formal approval from Optics 1 via RFD form may result in the rejection of said shipment.

Prevention of Counterfeit Parts: The organization shall plan, implement, and control processes, appropriate to the organization and the product, for the prevention of counterfeit or suspect counterfeit part use and their inclusion in product(s) delivered to Optics 1.

Optics 1 Inspection: All products and materials furnished by the supplier must conform to contractual requirements and specifications, and are subject to inspection and approval by Optics 1 after delivery. Optics 1 reserves the right to withhold payment if product is found to be defective or noncompliant to requirements and specifications of the purchase order. Optics 1 also reserves the right to reject and return, at the risk and expense of the supplier, all, or any portion(s) of shipment(s), which fail to comply with our requirements or specifications.

Nonconforming Material: The supplier shall establish and maintain a system within their organization to ensure that all non-conforming and suspect product is immediately identified, segregated, and dispositioned. The supplier is expected to properly record all non-conformances and dispositions. The corrective action system utilized by the supplier should be similar to the global 8D process with focus should on identifying the root cause(s) of the problem and taking action to immediately correct product and/or prevent its recurrence.

In the event that Optics 1 identifies product as defective or nonconforming, Optics 1 Supplier Quality Engineer and/or buyer will contact the supplier. Informal Quality Alerts, formal Discrepancy Reports (QAP-1000073) and/or formal Supplier Corrective Action Requests (QAP-1000011) may be submitted

to the supplier at that time. The supplier is required to acknowledge receipt of such notifications within one business day.

Upon issuance of a formal Supplier Corrective Action Request (SCAR), the supplier is required to take immediate action to validate and quarantine/contain all suspect product within their facility. Within one business day of the SCAR notification, the supplier must submit a written response to Optics 1 reporting the supplier's initial observations and defining an interim containment plan at the supplier's facility to assure that no nonconforming product is shipped to Optics 1. If suspect product has already been shipped, the supplier must address all suspect stock in transit and any stock at Optics 1. The supplier will assist Optics 1 in identifying customer risk by identifying all suspect lot numbers and associated quantities involved.

Unless otherwise stated on the SCAR, within 10 business days from the initial notification date, the supplier must submit a written response which includes Root Cause and Corrective/Preventative Action (CAPA) plan and its effective date. Upon implementation of CAPA plan the supplier and Optics 1 shall verify the effectiveness of the plan.

Unless agreed to otherwise, the supplier must submit the closed 8D corrective action with objective evidence that the corrective actions have been put into place within 4 weeks from the initial notification date.

Systemic quality issues and/or inadequate delivery performance, unresponsiveness to a SCAR or other form of inquiry by Optics 1 may warrant changing the status of the supplier from an approved supplier to a conditional or disqualified supplier within Optics 1 Approved Vendor List (AVL).

Optics 1 reserves the right to negotiate the recovery of costs from a supplier resulting from a delivery of nonconforming product to Optics 1 and subsequent delivery to our customer. Recovery may also include rejection fees, warranty claims, recall costs, downtime at Optics 1, or premium freight.

Clause 2 – CERTIFICATION OF CONFORMANCE: Each shipment must contain a document attesting that all applicable specification / drawing and purchase order requirements have been met. The CofC must include the purchase order number, part number including revision, quantity and/or serial number(s) and/or date/Lot code as applicable. This information must also be kept on file at the supplier's or it's subcontractor's facility and available for Optics 1 review for at least seven years from the date of shipment. Applicable to purchase orders that include Clause 20, all non-franchised or non-licensed re-sellers or Independent Distributors of OEM products must certify that items are not salvaged, reclaimed or previously rejected and must provide evidence of no unbroken CofC chains back to the original OEM.

Clause 3 – EXTERNAL PROCESS CERTIFICATION: Supplier must submit Certification of Conformance (CofC) from all subcontractors required for external processes. The CofC shall attest that all applicable specifications and purchase order requirements have been met.

Clause 4 – CERTIFICATION OF RAW MATERIALS: Each shipment shall contain a Certification of Conformance (CofC) from the manufacturer or licensed distributor of the raw material certifying that material supplied conforms to the specification invoked through the purchase order (including cure date and shelf life for all rubber products; synthetic or natural). CofC will attest that physical and/or chemical test reports of raw material supplied or used are on file and are traceable to the material supplied.

Clause 5 – IMPLIED CERTIFICATION: Shipment of material implies complete compliance with all purchase order requirements and related specifications. Inspection/test data proving compliance to applicable specification is on file either with supplier or original place of manufacture, and shall be sent on request for a period up to seven years. Implied certification is commonly reserved for COTS (commercial/catalog off the shelf) items unless approved otherwise by Optics 1 Supplier Quality Engineering.

Clause 6 – OPTICS 1 SOURCE INSPECTION: A successful source inspection performed by Optics 1 quality personnel is required prior to shipment of product from the supplier's facility. The supplier shall notify the Optics 1 buyer no later than 3 days in advance of product availability for inspection. In the event material is not ready for inspection upon arrival of Optics 1 personnel, the supplier may be liable for all trip related expenses incurred by Optics 1. A completed and approved source inspection shall not relieve the supplier of any liability for full compliance with all requirements of the purchase order.

Clause 7 – US GOVERNMENT SOURCE INSPECTION: US Government inspection is required prior to shipment of product from the supplier's facility. Upon receipt of this order, the supplier shall promptly notify Optics 1 Supplier Quality Assurance representative so that arrangements can be made for US Government inspection. Shipping documents delivered with the product to Optics 1 must show evidence of US Government inspection and acceptance. The supplier's quality system and manufacturing processes may also be subject to review and verification by authorized US Government representatives upon request by the US Government representative.

Clause 8 – UNAUTHORIZED CHANGES: The supplier shall not make any changes to the design, construction, components, material, or established manufacturing processes of an Optics 1 designed and specified product or process without obtaining written approval from Optics 1. The prime supplier may not use a contract manufacturer or other independent organization to perform the primary manufacturing process without obtaining written approval from Optics 1. The prime supplier may not utilize a different location within the prime supplier's organization or change a previously qualified subcontracted supplier without obtaining written approval from Optics 1. Evidence of qualification/approval of a contract manufacturer or subcontracted supplier by the prime supplier must be made available to Optics 1 upon request. Optics 1 reserves the right to perform an assessment of the proposed contract manufacturer or subcontracted supplier prior to Optics 1 approval.

Clause 9 – INSPECTION / TEST DATA: Supplier shall perform inspection and/or tests applicable to the requirements and specification(s) of the purchase order in accordance with Clause 1. Supplier will submit inspection and/or test results/data with each shipment. All results/data must be identified with Optics 1 part number, revision and/or unit serial number or other suitable identification to provide traceability to the lot or purchase order.

Clause 10 – OPTICAL COATING LOT ID & TEST DATA: Optical components requiring optical coatings are required to have coating lot number(s) noted on Certification of Conformance (CofC) or equivalent documentation, and noted on the primary container(s) of the optical components. Optical coating measurement/test results shall comply with Optics 1 specifications and shall be supplied with each coating lot.

Clause 11 – TIME AND/OR TEMPERATURE SENSITIVE PRODUCTS: Shipments of time and/or temperature sensitive products shall include container markings as applicable with shelf life or expiration date, date of manufacture or cure date, and temperature storage range. Material shall have no less than 75% of its original shelf life remaining upon arrival unless prior approval is obtained from Optics 1 in response to a Supplier's Request For Deviation (RFD) as stated within Clause 1.

Clause 12 – FIRST ARTICLE APPROVAL: The supplier shall manufacture and submit a First Article sample quantity as defined by the purchase order. Unless otherwise specified the supplier shall perform 100% inspection/test of all specified features and/or test requirements and shall document and submit all inspection/test results with samples. Optics 1 will conduct inspection and/or applicable qualification testing prior to authorizing shipment of additional quantities. Additional quantities produced by the supplier prior to release by Optics 1 are manufactured at supplier's risk unless stated otherwise within the purchase order.

Clause 13 –TRACEABILITY: The supplier shall establish and maintain a system for ensuring traceability of material and processes utilized during performance on this order. This requirement shall be flowed down by the supplier to all subcontractors that perform work on this order. All traceable records shall be kept on file for a minimum period of 7 years following completion of the order and shall be made available for Optics 1 upon request.

Clause 14 – RoHS COMPLIANCE: A declaration of compliance to the environmental standards and associated RoHS directives must be provided with each shipment during fulfillment of this purchase order. The RoHS directive aims to restrict certain dangerous substances commonly used in electronic and electronic equipment. Any RoHS compliant component is tested for the presence of Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent chromium (Hex-Cr), Polybrominated biphenyls (PBB), and Polybrominated diphenyl ethers (PBDE). For Cadmium and Hexavalent chromium, there must be less than 0.01% of the substance by weight at raw homogeneous materials level. For Lead, PBB, and PBDE, there must be no more than 0.1% of the material, when calculated by weight at raw homogeneous materials. Any RoHS compliant component must have 100 ppm or less of mercury and the mercury must not have been intentionally added to the component. Some military and medical equipment are exempt from RoHS compliance.

Clause 15 – ESD PACKAGING AND LABELING: All ESD sensitive materials as defined by ANSI/ESD-S20.20 shall be packaged in accordance with MIL-PRF-81705 and industry standards MIL-PRF-81705 and EIA-541. ESD identification labeling per MIL-STD-129 or JEDEC RS-471 for intermediate and external packages are required.

Clause 16 – REWORK / REPAIR OF PRINTED CIRCUIT BOARDS AND ASSEMBLIES: Rework and/or Repair of printed circuit boards and assemblies shall be performed in accordance with IPC-7711/7721.

- A. Optics 1 shall only accept repairs or rework which have a “Level of Conformance” rating of “High” as defined by IPC-7711/7721.
- B. Written Approval is NOT Required By Optics 1 for the following:
 - i. (REWORK) - Intermediate and Advanced Skill Level Rework with a high level of conformance as specified in IPC-7711/7721 are acceptable.
- C. Written Approval is Required BY Optics 1 for the following: – Optics 1 will review each request and respond in writing with approval or denial of such request.
 - i. (REPAIRS) - Intermediate, Advanced and Expert Skill Level Repairs with a high level of conformance as specified within IPC-7711/7721. The supplier must provide specific details of the repair actions being requested.
 - ii. (REWORK) - Expert Skill Level Rework with a high level of conformance as specified within IPC-7711/7721. The supplier must provide specific details of the rework actions being requested.
- D. Circuit repairs are limited to no more than two for each 0.09 m² (0.969 ft²) or less of area per side.
- E. Circuit repairs on any impedance-controlled circuits shall not violate the impedance requirements and require Optics 1 approval.
- F. Circuit repairs shall not violate the minimum electrical spacing requirement.

Clause 17 – LEAD (Pb) FREE EXEMPTION (RoHS): Unless approved in writing by buyer or specifically required by the part drawing or assembly drawing and associated parts list, no material delivered under this order may utilize:

Solders and finishes, (including, but not limited to: solder balls/columns for area arrays or components) containing less than three percent (3%) lead (Pb) by weight (Pb-free), except solder pre-forms for die attach within a microcircuit.

Bright tin (Sn) surface finishes as defined by ASTM B545-97).

Verification of solder ball composition on area array packages and component termination composition of fine pitch components identified by Optics 1 is required. Verification is required on one (1) piece from each date code and/or Lot Code and shall be performed using x-ray fluorescence (XRF) equipment or Optics 1 approved equivalent. Materials which fail these tests/inspections shall not be delivered under

this purchase order. Verification results shall be maintained by the seller for a minimum of four years and be available for Optics 1 review. The seller shall notify the buyer of any planned material changing to lead (Pb)-free finishes, plating's or solders associated with the part number. These changes must be evaluated and approved by Optics 1 prior to completion of order.

Clause 18 – CONTRACT MANUFACTURER: Suppliers providing printed wiring board assemblies (PWA's) or other manufactured assemblies that contain PWA's will only use new and authentic materials. No counterfeit or suspect counterfeit parts/components are to be contained within the delivered product. Parts/components shall be purchased directly from the Original Component Manufacturer or Original Equipment Manufacturer (OCM/OEM) or through an authorized distributor of the OCM/OEM. Documentation that authenticates traceability to the applicable OCM/OEM must be made available to Optics 1. Independent distributors (brokers) who are not affiliated, not authorized or not licensed by the OCM/OEM shall not be used without written approval from the Optics 1 buyer. Supplier shall ensure that PWA's delivered as independent products or incorporated by the supplier into an assembled product are manufactured and validated in accordance with Optics 1 PWA Standard ENG-003.

Clause 19 – PRINTED WIRING BOARD (PWB) FABRICATION: The supplier of unpopulated rigid, flexible or rigid/flex PWB's (bare circuit boards) shall ensure the PWB's are manufactured and validated in accordance with Optics 1 PWB Fabrication Standard ENG-004 and/or Flexible & Rigid-Flex PWB Fabrication Standard ENG-005. In addition to these standards the manufacturer will perform cross-section or micro-section analysis of circuit board panel coupons to validate the internal quality of circuit boards produced within the panel. Cross sectioned test coupons shall be safely archived by the PWB manufacturer for minimum of 7 years and shall be made available to Optics 1 and/or their prime contract manufacturer upon request. Contract Manufacturers that directly procure PWB's for Printed Wiring Assemblies (PWA) being delivered to Optics 1 shall ensure compliance of this requirement.

Clause 20 – INDEPENDENT DISTRIBUTORS: Independent Distributors of active and/or passive electrical components shall meet the requirements of IDEA-STD-1010, SAE AS5553 & AS6081 and have a Quality Management System. Additional requirements as follows:

Independent Distributor of Active Components: Independent Distributor's procedures shall meet the requirements of IDEA-STD-1010 and AS6081. Quality Management System shall be certified to AS9120 and/or AS9100. Inspections and tests shall be conducted in accordance with IDEA-STD-1010 and AS6081. IDEA-STD- 1010 and the inspection and tests defined below shall take precedence over AS6081 for conflicts in inspection methodology and defect criteria. Manufacturer specifications and parameters shall be used for part requirements as applicable. Recorded evidence of all testing performed shall be included with each shipment. When available, OEM/OCM and/or AD Certificates of Conformance (C of Cs) shall also accompany each shipment.

The following inspections and tests are required for active components as applicable based on device package type.

- 100% Visual Microscopy Inspection of all parts in the order is required to a magnification level capable of identifying nonconformities related to part size. This includes visual inspection requirements for packaging. Sampling for mechanical dimensions shall be as defined by Seller's internal procedures.
- X-Ray inspection (100% of the lot)
- XRF/RoHS (3 parts per lot date code)
- Solderability testing per IPC/EIA J-STD-002 (3 parts per lot date code)
- Scanning Electron Microscopy (1 part per lot date code)
- Solvent Testing for Remarking (3 parts per lot date code)
- Solvent Testing for Resurfacing w/acetone, (same 3 parts per lot date code)

- Scrape testing - only applicable to parts that cannot be heated solvent tested (same 3 parts per lot date code)
- Solvent Testing for Resurfacing (If pass acetone test) - Heated Solvent testing w/ Dynasolve 750, (same 3 parts per lot date code)
- De-lid and Die Verification (3 parts per lot date code)
- Flash and programmable memory devices shall be verified (100%) for clean memory, not pre-programmed

If suspect/counterfeit parts are furnished under this subcontract and are found in any of the goods delivered hereunder, such items will be impounded by Buyer. The Seller shall promptly replace such suspect/counterfeit parts with parts acceptable to the Buyer and the Seller shall be liable for all costs relating to the removal and replacement of said parts as specified in the subcontract requirements or Distributor's insurance policies. Buyer reserves all contractual rights and remedies to address grievances and detrimental impacts caused by suspect/counterfeit parts.

Seller shall report all occurrences of Counterfeit parts to the Government-Industry Data Exchange Program (GIDEP) and to Electronic Resellers Association International (ERAI).

Independent Distributor of Passive Components and Connectors: Independent Distributor procedures shall meet the requirements of IDEA-STD-1010 and AS6081. Quality Management System shall be certified to AS9120 and/or AS9100. Inspections and tests shall be conducted in accordance with IDEA-STD-1010 and AS6081. IDEA-STD- 1010 and the inspection and tests defined below shall take precedence over AS6081 for conflicts in inspection methodology and defect criteria. Manufacturer specifications and parameters shall be used for part requirements as applicable. Recorded evidence of all testing performed shall be included with each shipment. When available, OEM/OCM and/or AD Certificates of Conformance (C of Cs) shall also accompany each shipment.

The following inspections and tests are required for passive components and connectors as applicable based on device package type:

- 100% Visual Microscopy Inspection of all parts in the order is required to a magnification level capable of identifying nonconformities related to part size. This includes visual inspection requirements for packaging. Sampling for mechanical dimensions shall be as defined by Seller's internal procedures.
- X-Ray inspection for non-glass diodes and tantalum capacitors (100% of the lot)
- XRF/RoHS (3 parts per lot date code)
- Solderability testing per IPC/EIA J-STD-002 (3 parts per lot date code)
- Scanning Electron Microscopy (1 part per lot date code)
- Solvent Testing for Remarking (3 parts per lot date code)
- Solvent Testing for Resurfacing w/acetone, (same 3 parts per lot date code)
- Scrape testing - only applicable to parts that cannot be heated solvent tested (same 3 parts per lot date code)
- Solvent Testing for Resurfacing (If pass acetone test) - Heated Solvent testing w/ Dynasolve 750, (same 3 parts per lot date code)

All electrical test reports shall contain a read/record data table showing the measured values of each device tested. Electrical test shall be performed after parts have passed the inspection and tests listed above.

Sample value measurements required per ANSI/ASQ Z1.4 at ambient temperature, 1% AQL level II. Component value tests are defined in the following chart:

COMPONENT	TEST
Resistors	DC Resistance
Capacitors	Capacitance
Inductors	Inductance
Transformers (open framed/wiring)	Winding-to-winding isolation, winding continuity, winding inductance, turns or voltage ratio.
Connectors	Continuity on a 1% AQL sample of pins/connections
Relays	Contact and coil resistance

If suspect/counterfeit parts are furnished under this subcontract and are found in any of the goods delivered hereunder, such items will be impounded by Buyer. The Seller shall promptly replace such suspect/counterfeit parts with parts acceptable to the Buyer and the Seller shall be liable for all costs relating to the removal and replacement of said parts as specified in the subcontract requirements or Distributor's insurance policies. Buyer reserves all contractual rights and remedies to address grievances and detrimental impacts caused by suspect/counterfeit parts. Seller shall report all occurrences of Counterfeit parts to the Government-Industry Data Exchange Program (GIDEP) and to Electronic Resellers Association International (ERAI).

3.0 QAR Clause Assignments

Quality Assurance Requirement (QAR) Clauses as listed below form part of the Terms & Conditions of the Purchasing Order agreement. These requirements are in addition to all applicable standard text and/or terms and conditions of the Purchase Order agreement. The buyer is responsible for ensuring these requirements are assigned to the purchase order for the appropriate commodity or service. Removal or alteration of QAR clauses from any PO requires written approval by Supplier Quality Engineering.

<u>CUSTOM COMMODITIES</u>	<u>REQUIRED QAR CLAUSES</u>
MACHINING (all substrates) W/ FIRST ARTICLE	1, 2, 3, 8, 13 1, 2, 3, 4, 8, 9, 12, 13
STAMPED / SPRING FORMED METAL W/ FIRST ARTICLE	1, 2, 3, 8, 13 1, 2, 3, 4, 8, 9, 12, 13
ADDITIVE MANUFACTURED METAL W/ FIRST ARTICLE	1, 2, 3, 8, 13 1, 2, 3, 4, 8, 9, 12, 13
MOLDED / EXTRUDED PLASTIC & RUBBER W/ FIRST ARTICLE	1, 2, 3, 8, 13 1, 2, 3, 4, 8, 9, 12, 13
CASTED / MOLDED / EXTRUDED METAL W/ FIRST ARTICLE	1, 2, 3, 8, 13 1, 2, 3, 4, 8, 9, 12, 13
OPTICAL COMPONENTS / OPTICAL ASSEMBLY W/ FIRST ARTICLE	1, 2, 3, 4, 8, 9, 10, 13 1, 2, 3, 4, 8, 9, 10, 12, 13
PCB ASSEMBLY W/ FIRST ARTICLE W/ REWORK/REPAIR	1, 2, 3, 8, 13, 15, 16, 18, 19, 20 1, 2, 3, 8, 13, 15, 16, 18, 19, 20 1, 2, 3, 8, 13, 15, 16, 18, 19, 20
PCB/PWB BARE BOARD FABRICATION W/ FIRST ARTICLE W/ REWORK / REPAIR	1, 2, 3, 8, 13, 16, 19 1, 2, 3, 8, 9, 12, 13, 16, 19 1, 2, 3, 8, 13, 16, 19
CABLE ASSEMBLY W/ FIRST ARTICLE	1, 2, 3, 8, 13 1, 2, 3, 8, 9, 12, 13
LABELS & PRINTED ITEMS W/ FIRST ARTICLE	1, 2, 3, 8, 13 1, 2, 3, 8, 9, 12, 13
TEXTILE MANUFACTURING W/ FIRST ARTICLE	1, 2, 3, 8, 13 1, 2, 3, 4, 8, 9, 12, 13
CUSTOM SOFTWARE W/ FIRST ARTICLE	1, 2, 8, 13 1, 2, 8, 12, 13
CUSTOM HARDWARE / FASTENER W/ FIRST ARTICLE	1, 3, 2, 8, 13 1, 2, 3, 4, 8, 9, 12, 13
FINISHING / PLATING / COATING / PAINTING W/ FIRST ARTICLE	1, 2, 3, 8, 13 1, 2, 3, 8, 12, 13

<u>COTS ITEMS</u>	<u>REQUIRED QAR CLAUSES</u>
GENERAL CATALOGUE OFF THE SHELF	5
PACKAGING MATERIALS	5
CHEMICALS / SOLDER	2, 11, 13
HARDWARE / FASTENERS	2, 13
ELECTRONIC COMPONENTS	2, 13, 14
INDEPENDENT DISTRIBUTOR COMPONENTS	2, 13, 14, 20
<u>SERVICES</u>	<u>REQUIRED QAR CLAUSES</u>
CALIBRATION / TEST SERVICES	1, 2
GENERAL REWORK/REPAIR	1, 2
<u>PER CUSTOMER CONTRACT</u>	<u>REQUIRED QAR CLAUSES</u>
CUSTOMER FURNISHED EQUIPMENT (CFE)	5
US-GOV'T FURNISHED EQUIPMENT (GFE)	5
<u>CONTRACT MANUFACTURING</u>	<u>REQUIRED QAR CLAUSES</u>
CONTRACT MANUF ASSY (w/out electronics) W/ FIRST ARTICLE	1,2,3,8,9,13,18 1,2,3,4,8,9,12,13,18
CONTRACT MANUF ASSY (w/electronics) W/ FIRST ARTICLE	1,2,3,8,9,13,14,15,16,18,19,20 1,2,3,8,9,12,13,14,15,16,18,19,20