



PRECISION OPTICAL QUALITY ASSURANCE NOTES

The Quality Assurance Provisions (QAPs) herein are applicable to Precision Optical Purchase Orders when referenced as a requirement therein. Compliance to the designated Quality Assurance Notes is necessary to meet contractual requirements.

1. Purpose and Scope.

The purpose of this document is to define the Quality Assurance Provisions Precision Optical requires for inventory material received from Suppliers. This document applies to Purchase Orders and Supply Contracts issued by the Precision Optical Purchasing Department.

2. Responsibility.

The Supplier is responsible for ensuring conformance to the Quality Assurance Provisions (QAPs) referenced on the Purchase Order. Precision Optical uses QAPs as part of product acceptance and approval of Suppliers Quality Assurance processes.

3. Procedure

Quality Assurance Provisions are communicated to Suppliers on Precision Optical Purchase Orders (P.O.s). If QAPs apply, the QAP numbers will be displayed for each line item on the P.O. These numbers refer to the QAP requirements listed below. Each QAP requirement provides detailed instructions to assist Suppliers with conformance. If the material is purchased through a distributor, the distributor remains responsible for flowing down the requirements to their Suppliers. Precision Optical reserves the right to waive or amend QAP's and will do so in writing. In the event of any conflicting requirements, the following order of precedence applies:

1. Purchase Order
2. Individual Specification/Drawings
3. Referenced Specification

QAP01 ISO 9001 REQUIREMENTS

The Supplier shall maintain a quality program that meets the requirements of ISO9000. This program will be subject to review and approval by Precision Optical Quality Personnel at all times during the period of performance of this purchase order.

QAP02 SAFETY DATA SHEETS (SDS)

All materials that are volatile, toxic or which emit fumes that are harmful to human health shall be properly contained in accordance with applicable health and safety requirements. The containers shall be plainly marked as to contents with appropriate warnings, precautions, instructions and storage conditions. Safety Data Sheets (SDS) shall be provided with each shipment.

QAP03 TEST REPORTS

The supplier shall provide actual quantifiable test data or indication of pass/fail test results (when applicable). The Supplier's format is acceptable but must be legible and shall reference the purchase order number, Supplier's name and/or independent laboratory's name, product number, serial number or lot date code(s), if applicable, and the date of the test. An authorized Supplier's representative shall validate all submitted reports and signify such through approval.

QAP04 INSPECTION/TEST DATA

Each shipment of material on this order shall be accompanied by inspection and/or test data showing compliance to drawing of specification requirements. The reports shall contain the purchase order number, Supplier's name and address, part number and name, serial number (if applicable), test conducted, actual results of test or variable measurements and approval signature of the Supplier's quality representative.



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QAP05 ACCEPTANCE TEST PROCEDURES

The Supplier shall prepare detailed test procedures, encompassing test required for in-process and final acceptance. Each item of hardware, or part thereof, which requires acceptance testing, shall be covered by an acceptance test procedure. Final and in-process acceptance test procedures require Precision Optical Quality approval prior to the delivery of the first unit of hardware. Subsequent changes are subject to Precision Optical Quality approval prior to incorporation.

QAP06 100% PRODUCT INSPECTION

100% inspection shall be performed on each product supplied under this purchase order for all product characteristics, including drawing notes. Records of inspection results showing actual values shall be maintained by the supplier and one (1) copy of each record shall be included with the shipment. Each record shall be traceable to the individual product to which it applies by serial number or other unique identification. The records shall contain the associated purchase order number, part number and revision.

QAP07 FIRST ARTICLE INSPECTION

First article inspection required per AS9102. Supplier shall provide First Article report using the AS9102 forms. With approval from Precision Optical's QA Coordinator, Supplier's own forms are acceptable with AS9102 cover sheet. Supplier is responsible for initiating First Article when there is a change in the design affecting form, fit, or function of the part (including revision change) and when specifically requested by Precision Optical. Supplier shall notify Precision Optical when there is a significant change which may affect the product such as:

- A change in manufacturing sources, processes, inspection methods, location of manufacture, tooling or materials that can potentially affect fit, form or function.
- A change in numerical control program or translation to another media that can potentially affect fit, form or function.
- A natural or man-made event, which may adversely affect the manufacturing process.

QAP08 CERTIFICATE OF CONFORMANCE

The Supplier shall submit a Certificate of Conformance (C of C) with each shipment, stating that the product(s) or services furnished on this purchase order conforms to the applicable specifications or requirements (i.e. quality assurance provisions, drawings, material, process, test specifications, etc.). The Supplier shall maintain quality records to substantiate product compliance to the purchase order and must be capable of furnishing copies of these records immediately upon request.

Certification shall include:

- Contract Purchase Order number.
- Part number and revision level.
- Quantity and if applicable, serial numbers.
- Manufacturer's name and if applicable, manufacturer's part number.
- Applicable date code or lot number.
- Statement that parts, materials, or services fully conform to the applicable drawings, specifications, and purchase document requirements.
- Attach Material Certification and/or Special Process Certification documentation
- Date, signature, and title of authorized representative of the supplier.

Material certifications are required whenever a first article inspection is required otherwise the certificate of conformance suffices

QAP09 RIGHT OF ACCESS

Precision Optical reserves the right to review the process controls and quality of work in process at any time during the performance of this order. Such review may take place at the Supplier's facilities and may include personnel from Precision Optical and its customers.



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QAP10 CONTROL OF QUALITY RECORDS

All records related to the manufacturing, testing and inspection of parts supplied to a Precision Optical purchase order shall be maintained for a minimum of seven (7) years from delivery and final payment, unless otherwise specified.

QAP11 NOTIFICATION OF NON-CONFORMANCES

The Supplier shall inform Precision Optical immediately when there is a reason to suspect that products previously supplied to Precision Optical may not be in accordance with the Precision Optical drawing(s), specification, or purchase order requirements. The Supplier shall promptly inform Precision Optical of any circumstance related to materials, manufacturing, processing, methods, design, etc. which may make a product susceptible to premature failure or otherwise place the safe operation of that product at risk. The notification shall describe the nature of the discovered anomaly, its applicability to Precision Optical part number(s), quantities affected and the probable impact to the proper function/performance of the item supplied. Supplier is responsible to notify Precision Optical if they have received any corrective actions from the government or regulatory agencies within 30 days.

QAP12 CONTROL OF LIMITED SHELF-LIFE AND STORAGE CRITICAL MATERIALS

The material associated herein is deemed to require special controls to ensure its usability throughout the manufacturing cycle and beyond. Therefore all product certifications must include, as applicable: shelf life start date, expiration date, storage conditions, handling requirements, and lot/batch identification to include the material specification identification.

Items shall have a minimum shelf life remaining of 75% at time of receipt

When storage temperature requirements other than ambient $25^{\circ}\pm 5^{\circ}\text{C}$ are required, they shall be clearly marked on the outermost shipping container.

QAP13 RAW MATERIALS – SUPPLIER TRACEABILITY TO MANUFACTURER SOURCE

The supplier shall include appropriate test data sheet for each part number, lot number, batch specific material types or heat-treat as specified on the Precision Optical drawing and/or specification to all raw material(s) delivered. Test data sheets shall reference the purchase order number, Precision Optical part number and revision.

The supplier shall state, as applicable, on their packing slip and/or on their Certificate of Conformance:

- The name of the original product manufacturer;
- Date code and/or lot number of the specific part(s) in each shipment;
- Melt/boule/batch numbers of the specific part(s) in each shipment;
- Listing the results of tests normally conducted by the Supplier;
- Evidence of conformance to recognized specifications

A copy of the manufacturers' certificate of conformance is also required with each shipment.

QAP14 CERTIFICATE OF GLASS TO MIL-G-174

Supplier shall obtain certification of his compliance with Amendment 2 of MIL-G-174. Each and every melt of glass used in the fabrication of finished optics shall be tested and certified by the raw glass material manufacturer.

QAP15 CERTIFICATE OF GLASS TO ISO 12123

Supplier shall obtain certification of his compliance. Each and every melt of glass used in the fabrication of finished optics shall be tested and certified by the raw glass material manufacturer.



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QAP16 OPTICAL COATING SCANS

Coating scans for each coating run are required with each shipment of product. Scans must include Supplier's name, Precision Optical Purchase Order number and run number. Coating scans must be labeled with either reflectance or transmittance as appropriate and scaled in a manner which allows easy verification of conformance to specification.

QAP17 WITNESS SAMPLES

Supplier is required to supply witness samples of corresponding material type with each shipment of product. A witness sample must be supplied for each coating run, not each deliverable lot. Witness samples must be identifiable and traceable to each coating run.

If the witness samples are to be provided by Precision Optical the quantity, size and type should be clarified in the corresponding quotation.

QAP18 COATING DURABILITY AND/OR ENVIRONMENTAL TEST RESULTS

Durability and/or Environmental Test results are required with each coating run, not each deliverable lot.

QAP19 SPECIALTY METALS CLAUSE DFARS FLOW DOWN TO SUPPLIER

Each shipment on this purchase order must be accompanied by certified documents showing traceability and compliance to the latest revision of the following DFARS:
DFARS 252.225.7007, Prohibition on Acquisition of Certain Items from Communist Chinese Military Companies;
DFARS 252.225.7008, Restriction on Acquisition of Specialty Metals;
DFARS 252.225.7009, Restriction on Acquisition of Certain Articles Containing Specialty Metals;
DFARS 252.225.7052, Restriction on the Acquisition of Certain Magnets, Tantalum and Tungsten

QAP20 SPECIAL PROCESSES

Special Process Definition - A documented method used to manufacture products where:
When a product undergoes a physical, chemical or metallurgical transformation or inspection, conformance to the specification cannot be readily verified by normal inspection methods, and the quality of the product depends on use of specific equipment operated in a specific manner, under controlled conditions, by trained personnel with instructions, procedures and standards.

For all Welding, Brazing, Additive Manufacturing, and Lockheed Martin Controlled Special Process Specifications only suppliers listed as approved for these specific special processes within Lockheed Martin approved suppliers list can be used.

All remaining special processes require either buyer's approval or NADCAP accreditation, as follows: Prior to selecting/using a NADCAP special process supplier, the Seller and/or sub-tier suppliers shall contact the selected NADCAP special process supplier and confirm that they currently perform the specific Type, Class, Method, etc. per the associated drawing requirements. Seller shall have documentation records available providing objective evidence of adherence to this Purchase Order Note requirement. Precision Optical reserves the right to access these records upon request

QAP21 COUNTERFEIT PARTS PREVENTION

Only new and authentic materials are to be used in products delivered to Precision Optical. No counterfeit or suspect counterfeit parts are to be contained within the delivered product. Parts must be purchased directly from the original manufacturer, or through the original manufacturer's franchised distributor. Documentation shall be available that authenticates traceability to the applicable original manufacturer. Independent distributors or brokers may not be used without



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written consent from Precision Optical. Original certificates of conformance must be available for all purchases. If subcontractors or contract manufacturers are used in the production of the goods order under this Agreement, then Seller must include the requirements of this paragraph in its agreement(s) with such subcontractors or contract manufacturers.

QAP22 MEASURING & TEST EQUIPMENT

It is the seller's responsibility to ensure all equipment; including Customer Furnished Equipment (CFE), and Government Furnished Equipment (GFE), used to test and inspect Precision Optical supplied parts are maintained and traceable to the National Institute of Standards and Technology (NIST) requirements. The calibration system used by the supplier must be in accordance with ISO 17025, General Requirements for the Competence of Testing and Calibration Laboratories and Z540.1, Requirements for the Calibration of Measuring and Test Equipment. Additionally, the supplier shall demonstrate compliance to ISO 10012 Measurement Management Systems – Requirements for Measurement Processes and Measuring Test Equipment.

Note: This requirement does not apply to franchised distributors of Original Component Manufacturers (OCM) selling unmodified commercial of the shelf components (e.g. capacitors, resistors, transistors etc. purchased to an OCM data sheet).

QAP23 PRECISION OPTICAL SOURCE INSPECTION

Precision Optical Source Inspection is required prior to shipment from Supplier's plant. Supplier is to notify Precision Optical 5-days prior to material availability for source inspection to effect timely scheduling and planning. The source inspection by Precision Optical personnel shall in no way relieve Supplier of the responsibility for furnishing the specified supplies and services that meet the requirements of the purchase order. The inspection facilities, personnel, and equipment the Supplier normally uses are to be made available to the Precision Optical inspector to recheck parts the Supplier's inspection department has inspected and accepted. Supplier shall have available and present upon demand, documented evidence of the inspection/test performance including in-process and/or final test. Required documentation for shipment shall be completed and signed by the Supplier's authorized quality personnel.

QAP24 STATISTICAL PROCESS CONTROL

Supplier shall have a documented SPC program in effect in their facility which is acceptable to Precision Optical. Statistical data shall be submitted as evidence that the Supplier's parts and processes are within process control limits and within specification tolerances when requested by this purchase order.