

GENERAL PROVISIONS

I. **PURPOSE**: This document establishes the Quality requirements applicable to products and materials ordered and Purchase Orders issued by GPD Optoelectronics Corporation.

II. DEFINITIONS AND ABBREVIATIONS:

- 1. GPD GPD Optoelectronics Corporation.
- 2. Product The results of activities or processes. A product shall include, but not be limited to: service, hardware, software, processed material, or a combination thereof.
- 3. Contract The Contract, Subcontract, Purchase Order, or other written agreement between GPD and the Supplier.
- Supplier The Person(s) and/or Company/ Corporation providing goods and/or services to GPD.
- 5. CAR Corrective action report.
- III. GENERAL REQUIREMENTS: Unless otherwise specified in the Purchase Order, all of the following general requirements apply.
- 1. **PURCHASE ORDER RECEIPT AND VERIFICATION:** Within 48 hours of receipt, the Supplier shall provide confirmation of receipt of the purchase order issued by GPD. Any discrepancies in price, quantity, specifications, quality requirements, packaging, or delivery requirements shall be immediately communicated to and resolved with GPD Purchasing before acting on the Purchase Order. The purchase order and its contents will be deemed accepted in the absence of confirmation.
- 2. **GPD ACCEPTANCE AT DESTINATION:** The products and materials ordered under GPD Purchase Orders are subject to final acceptance at their destination.
- 3. QUALITY PROGRAM REQUIREMENTS: The Supplier shall establish and maintain a quality system to the requirements of ISO 9001 or an equivalent GPD approved quality system. <u>The Supplier's Quality Management System</u> <u>shall be subject to audit and review by GPD</u>. The Supplier retains full responsibility for ensuring that all products, lower-tier suppliers, supplies used, or services furnished, comply with applicable requirements of ISO 9001 or an equivalent GPD approved quality system..
- 4. ACCESS TO SUPPLIER'S FACILITY: During the performance of this purchase order, the Supplier's Quality Assurance, Inspection, and Manufacturing process are subject to review, verification, and analysis by GPD and/or Government/Customer representative. This requirement is applicable to the Supplier's facilities where GPD products and services are processed as well as the Supplier's subtiers.
- 5. **CONFLICTS:** In the event of conflicts between the requirements of the Purchase Order and applicable product specifications or drawings, the Purchase Order shall govern.
- 6. **SUBMITTAL OF DOCUMENTATION:** Adequate records of inspections, tests and certifications shall be maintained throughout the manufacturing process by means deemed suitable by the Supplier. The information shall be supplied to GPD upon request. GPD may refuse to accept products if the Supplier fails to submit the documentations required by the Purchase Order Quality Assurance Provisions.

 REWORKED/REPLACED MATERIAL: When returning previously rejected material to GPD, the Supplier shall reference on the shipping document the GPD CAR and Purchase Order number and will state if the items have been replaced or reworked.

8. SUPPLIER NON-CONFORMANCE APPROVAL REQUEST:

Requests for any departures from drawings, specifications, or other purchase order requirements must be recorded and submitted for consideration by GPD. Material shipped on an approved non-conformance request must be accompanied by a signed, GPD approved copy of the request.

9. NON-CONFORMING MATERIALS CORRECTIVE ACTION:

Upon notification from GPD that material furnished by the Supplier is found discrepant upon receipt at GPD, the Supplier shall promptly notify GPD, in writing, of adequate and acceptable corrective action taken to eliminate the cause of the discrepancy. The Supplier's response shall include; (a) Root Cause of Defect, (b) Corrective Action Taken, (c) Action to Prevent Recurrence, and (d) Effectivity Point of such Corrective Action. If Government Source Inspection is a requirement of the PO, the Supplier shall notify the appropriate Government Representative, so that he/she may participate in the investigation and corrective action; if they so desire.

10. RECORDS RETENTION: The Supplier shall maintain adequate records of all First Articles, In-process, Final Inspections, Tests, and part data history as imposed by PO. Inspection records shall indicate the nature and number of observations made for the number and type of deficiencies found, the quantities approved and rejected, and the nature of corrective action taken, as appropriate. The First Article Inspection reports shall include all drawing dimensions, general notes, and tolerance range along with actual measurement results. This information and all supporting documentation such as raw material certifications, special processing records and certifications, manufacturing records, i.e., route sheets and travelers, shall be retained by the Supplier in accordance with the terms of the purchase order. When the Purchase Order is complete, such records shall be maintained and available to the buyer on request for a period of no less than ten (10) years from the closing of the purchase order unless stated otherwise on the PO.

11. CONFLICT MINERALS POLICY:

a. On August 22, 2012, the final rule regarding sourcing of conflict minerals under Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act ("the Dodd-Frank Act") was approved by the U.S. Securities and Exchange Commission ("SEC"). The rule imposes reporting requirements on publicly traded companies relating to the presence of conflict minerals in the products that they manufacture. For more information on this regulation, visit <u>http://www.sec.gov/news/press/2012/2012-163.htm</u>. Section 1502 of the Dodd-Frank Act designates Tin (Sn), Tungsten (W), Tantalum (Ta), and Gold (Au) as "conflict minerals."



- b. The SEC's conflict mineral rule focuses on the Democratic Republic of the Congo ("DRC") and adjoining countries (referred to as "Covered Countries"). Publicly traded companies are now required by the SEC to disclose annually whether conflict minerals necessary to the functionality or production of products they manufacture or contract to manufacture are "DRC conflict free." According to the SEC's final rule, this means that any conflict minerals used in manufactured products that originated from the DRC, and adjoining countries (the "Covered Countries") did not directly or indirectly finance or benefit armed groups within these countries.
- c. The SEC's final rule on conflict minerals applies to GPD suppliers of products and materials that are incorporated into GPD's products, regardless of where the Supplier is located. GPD encourages our suppliers to:
 - responsibly source conflict minerals and derivative metals from the DRC and neighboring countries in order to prevent a de facto embargo and associated worsening of economic conditions and human suffering in the region;
 - develop policies and procedures toward preventing the use of conflict minerals or derivative metals sourced from mines controlled by armed groups in all items supplied to
 - GPD;
- d. GPD suppliers must document their efforts to determine the source of any conflict minerals or derivatives and should be prepared to provide GPD with evidence of the origin of any conflict minerals in products supplied to GPD.
- 12. **INSPECTION SAMPLING:** Unless otherwise specified in the Purchase Order, the Supplier may use sampling procedures when tests are destructive or when quality history, inherent characteristics, statistically controlled processes or operation repeatability due to numerically controlled machines justify less than 100% inspection. <u>Sampling plans shall be in accordance ANSI Z1.4</u>, with the exception that lot acceptance will always be: "accept on zero, reject on one".

13. FOREIGN OBJECT PREVENTION, DETECTION AND REMOVAL:

The Supplier shall maintain a FOD (Foreign Object Damage/Debris) control program assuring work is accomplished in a manner preventing foreign objects or material from entering and remaining in deliverable items. Maintenance of the work area and control of tools, parts, and material shall preclude the risk of FOD incidents. The Supplier shall document and investigate all FOD incidents assuring elimination of the root cause. GPD shall have the right to perform inspection and/or audits as a method of verification that the Supplier's FOD control program is functional, documented, and effective. The Supplier shall identify a FOD control person responsible for implementing FOD prevention awareness and training.

The Supplier shall inspect foreign objects/materials prior to closing inaccessible or obscured areas or compartments during assembly. Tooling, jigs, fixtures, test equipment, and

handling devices shall be maintained in a state of cleanliness and repair to prevent FOD. Supplier shall provide a statement of certification that deliverable products are free of any foreign materials that could cause damage to the product or to the components/systems of which the product is a part or to which the product is attached.

14. GOVERNMENT OR BUYER PROPERTY: If, in

connection with the performance of this purchase order, any property is furnished to Supplier by GPD or by the Government, Supplier shall assume the risk of, and be responsible for, any loss, theft, destruction of or damage to the property while in Suppliers possession or control except to the extent that this purchase order, with the prior approval of GPD and/or Government, provides for the relief of Supplier from such liability. In the absence of such approval, Suppliers shall return all such property in a condition as good as when received except for reasonable wear and tear for the utilization of such property in accordance with the provisions of the prime contract. Suppliers shall establish and maintain a system in accordance with the provisions of FAR 52.245-1 for the control of the Government or GPD owned property. Suppliers shall also notify GPD if approval of its property system has been withdrawn by the Government. At all times, Buyer and the Government shall have access to Suppliers facilities for the purpose of reviewing its compliance with the management of Government or GPD property related to this purchase order.



QUALITY ASSURANCE PROVISIONS

One or more of the following Quality Assurance Provisions (QAPs) are a requirement of the contract when specified by code number in the contract.

Q1 CERTIFICATE OF COMPLIANCE: The Supplier shall provide certification with each shipment that all quality assurance provisions and other applicable requirements indicated on the PO have been met in accordance with the specifications stated in the item description/part number appearing on the Purchase Order. This certification shall be signed by a company officer or other designated responsible individual. The following information is required on the conformance certification.

- GPD Purchase Order Number
- Part Number and revision
- Inspection Date
- Quantity and Serial Number(s) (SN's if applicable)
- Supplier Name
- Authorized Signature

Q2 ELECTROSTATIC DISCHARGE SENSITIVE (ESDS)

PRODUCTS: This product is considered to be susceptible to electrostatic discharge. The Supplier is responsible for ensuring that the product is manufactured, tested, and handled in accordance with <u>ANSI/ESD S20.20-2021 or equivalent</u> and shall maintain procedures, personnel training records and calibration of ESDS testing equipment. The Supplier's ESDS program is subject to audit or review by GPD with prior notification.

- **Q3 SERIALIZATION:** Each product furnished on this Purchase Order shall be identified by a unique serial number. When specific serial numbers are required, they shall be identified by agreement between GPD and Supplier.
- **Q4 PACKAGING:** Unless otherwise specified, packaging shall be adequate to ensure safe delivery to destination. Quality Assurance Provisions (QAP) Q2 applies to ESDS materials.
- Q4A PACKAGING OF DETECTOR DIE Place part(s) in appropriate sized Gel-Pack. Vacuum seal Gel-Pack inside a metalized ESD bag with a desiccant.
- **Q6 SUBCONTRACTING:** This Purchase Order may not be sub-contracted by the Supplier without written approval from GPD.
- **Q6.1 SUB-TIER CONTROL:** With subcontracting approval from GPD, the Supplier shall be responsible for the flow down of all the requirements and provisions of the GPD purchase order applicable to the Supplier's subcontractors. Additionally, the Supplier shall comply with special processes requirements when imposed.

Q7 SOLDERING AND WORKMANSHIP:

- **Q7.1** IPC-A-610, Class 2, Acceptability of Electronic Assemblies AND J-STD-001
- **Q7.2** IPC-A-610, Class 3, Acceptability of Electronic Assemblies AND J-STD-001

Q7.3 IPC-A-610, Class 3 with the modifications listed below (Note: these sub-notes are NOT intended to apply to Component Parts or Component Assemblies subject to soldering at a higher level of assembly where reflow could take place. It is understood that High Temperature Solders are appropriate and required to prevent solder reflow at a higher level of assembly).

Solder alloys such as Sn60Pb40, Sn62Pb36Ag2, and Sn63Pb37, shall be in accordance with J-STD-006. Other solder alloys shall not be used for electrical and electronic assembly soldering unless otherwise specified on the drawing or purchase order. (Reference J-STD-001 Para. 3.2)

Q7.4 Records of X-ray results shall be provided on a suitable media (CD, USB drive, encrypted emails to <u>Purchasing@gpd-ir.com</u>, with each shipment.

Q8 FIRST ARTICLE INSPECTION (SUPPLIER):

FAI Report is required if Q8 is included in the Purchase Order. Compliance with this requirement must be demonstrated by submitting a first article inspection report per AS 9102 or equivalent (GPD Approved) format. First Article Inspection (FAI) reports must include serial numbers (when applicable), all dimensions, general notes, tolerance ranges, actual measurements, and where physical testing is required the results of the tests. First article units must be identified as "First Article" by tagging, special packaging, or other suitable means of identification. GPD recommends using AS9102 forms unless an equivalent format has been approved by GPD. FAI Report must include:

- a) A listing of measuring equipment and/or tooling with identification (e.g., Asset No.) used as method of inspection.
- b) An indication of the person (i.e., signature or stamp) who conducted the FAI inspection. The inspector must also legibly print name and title next to signature or stamp.
- c) The sampling plan for the product delivered.
- d) Records of X-ray results on a suitable media, if Q7.3 & Q7.4 is included in the Purchase Order.
- **Q9 CALIBRATION SYSTEM:** The Supplier's calibration system for measuring and test equipment shall be in accordance with the requirements of ISO/IEC 17025:2017 or equivalent approved calibration system. The Supplier retains full responsibility for ensuring that all products, lower-tier suppliers, supplies used, and services furnished comply with all calibration requirements.
- **Q10 SHELF LIFE:** Materials such as epoxies, adhesives, fluxes, solvents and similar age sensitive material shall arrive at GPD with at least 75% of shelf life remaining. Shelf-life expiration information shall be identified on the product container or the shipping documents. Chemicals shall be shipped with the MSDS sheets.
- **Q11 UNAUTHORIZED REPAIRS:** Supplier shall not repair products or materials found to be faulty during fabrication unless authorized in writing by GPD.



- **Q12 NOTIFICATION OF CHANGE:** The Supplier shall not change the process, design, fabrication, testing, facilities, material or drawing requirements without receiving prior written approval from GPD. The Supplier shall allow GPD an opportunity to review such changes to the contractual QA provisions, including any approvals.
- Q13 AUTHORIZED DISTRIBUTION: GPD is committed to eliminating the entry of counterfeit material into our product by using only factory-direct or their authorized distributors as approved suppliers for materiel procurement. Only new and authentic materials are to be used in products delivered to GPD. No counterfeit or suspect counterfeit parts are to be contained within the delivered product. Parts shall be purchased directly from the OCMs/OEMs, or through the OCM/OEMs Franchised Distributor. Documentation must be available that authenticates traceability to the applicable OCM/OEM. Independent Distributors (Brokers) shall not be used without written consent from the Buyer. Materiel in this requirement refers to material, parts, assemblies, and other procured items as defined in SAE AS6174. Electronic parts are defined in SAE AS5553.

Q14 CLEANLINESS ACCEPTABILITY REQUIREMENTS:

Requirements for electronic assemblies is C22 unless otherwise specified. C22 Test Reports for individual assemblies need not be recorded or submitted unless required by the PO. C22 Results need to be maintained at the Supplier facility per GPD's General Provisions paragraph 10. (Record Retention).

Q15 FEDERAL ACQUISITION REGULATIONS: The following clauses set forth in the FAR/DFARS as in effect on the date of this purchase order are incorporated herein by reference. Where necessary to make the clauses applicable to this purchase order, "Contractor" shall mean "Supplier," "Contracting Officer" shall mean "Buyer," and the "Government" shall mean "Buyer" or the "Government" whenever appearing in the clauses, unless otherwise noted. Supplier shall include the following clauses in its lower-tier purchase orders as required. If any of the following FAR or DFARS clauses do not apply to a particular purchase order, such clauses are considered to be self-deleting.

a) All Orders:

- 52.203-3 Gratuities
- 52.215-23 Limitations on Pass-Through Charges
- 52.216-11 Cost Contract No Fee
- 52.216-7 Allowable Cost / Payment
- 52.203-15 Whistleblower Protections Under the American Recovery and Reinvestment Act of 2009 (applicable if funded in whole or in part with Recovery Act funds)
- 52.211-15 Defense Priority and Allocation Requirements
- 52.222-21 Prohibition of Segregated Facilities
- 52.222-26 Equal Opportunity
- 52.222-50 Combating Trafficking in Persons
- 52.223-3 Hazardous Material Identification and Material Safety Data
- 52.225-13 Restrictions on Certain Foreign Purchases

	Government Property (except in clauses
	(e)(1), (e)(2)(ii),(e)(3)(i),(f)(1)(ii), the term
	"Government" shall remain)
	Preference for U.S. – Flag Air Carriers
	Preference for Privately Owned U.SFlag
	Commercial Vessels
	Compliance with safeguarding covered
	defense information controls
	AntiterrorForceProtectDefContractOutofUS
	Restr on Acq of Articles – Specialty Matal
	Preference Certain Domestic Commodities
	Safeguarding Covered Defense Information
	and Cyber Incident Reporting
	Notice of NIST SP 800-171 DoD Assessment
	Requirements
	NIST SP 800-171 DoD Assessment
	Requirements
	Cybersecurity Maturity Model Certification
	Buy American Act and Balance of Payments
	Program. (Applies in lieu of FAR 52.225-1.)
	Prohibition on Acquisition of certain items
	from Communist Chinese Military Companies
	Preference for Domestic Specialty Metals
	JUN 2005), Alt. I (APR 2003)
	Restriction on Acq of Ball Roller Bearings
	Trade Agreements
	Technical Data-Commercial Items
	Validation of Restrictive Markings on
	Technical Data
	Requirement for Competition Opportunity for
	American Steel Producers, Fabricators, and
	Manufacturers
	Notification of Potential Safety Issues
	2016.V Counterfeit Part Detect & Avoidance-
	2016
	Sources of Electronics Parts
	Transportation of Supplies by Sea
	Notification of Transportation of Supplies by
	Sea
	Notification of Anticipated Contract
	Termination or Reduction. (Delete paragraph
	(d) (1) and the first five words of paragraph
	(d)(2).)
	American Act#Supplies
52.225-5 Trad	
	ver Buy Amer Act Civil Aircraft Rel Article
	ection Supplies Cost Reimburse
	ection Svcs. Cost Reimbursement
52.240-0 INSP	ection T&M and Labor-Hour Reimbursement
b) Orders of \$:	3,000 and Greater – All the above clauses
plus:	
	ployment Eligibility Verification
	couraging Contractor Policies to Ban Text
	ssaging While Driving
	10,000 and Greater – All the above clauses
plus:	

- 52.222-36 Affirmative Action for Workers with Disabilities
- 52.222-40 Notification of Employee Rights under the National Labor Relations Act



d) Orders of \$100,000 and Greater – All the above clauses plus:

- 52.222-35 Equal Opportunity for Veterans
- 52.222-39 Notification of Employee Rights Concerning Payment of Union Dues or Fees

e) Orders of Greater than \$150,000 – All the above clauses plus:

- 52.203-12 Limitation on Payments to Influence Certain Federal Transactions
- 52.219-8 Utilization of Small Business Concerns
- 52.219-9 Subcontract SB/SDB Plan

f) Orders of \$500,000 and Greater – All the above clauses plus:

252.226-7001 Utilization of Indian Organizations, Indian-Owned Economic Enterprises, and Native Hawaiian Small Business Concerns

FAR Part 15

FAR 52.204-2 Security Reqs Clause FAR 52.224-3 Security Reqs Clause

Q16 PRODUCT IMPOUNDMENT AND FINANCIAL

RESPONSIBILITY: If suspect or confirmed fraudulent/counterfeit material is furnished under a contract/purchase order, such items shall be impounded. The Supplier shall promptly replace such items with items acceptable to the buyer and the supplier may be liable for all costs relating to impoundment, removal, and replacement. The Buyer may turn such items over to the authority having jurisdiction for investigation and reserves the right to withhold payment for the items pending the results of the investigation. Buyer reserves all contractual rights and remedies to address grievances and detrimental impacts caused by suspect/counterfeit parts.

Q17 NON-FRANCHISED DISTRIBUTOR MATERIAL DOCUMENTATION REQUIREMENTS: Prior to

Purchasing, the following verifications and test shall be performed on the specified material and submitted to the Buyer for review and approval. Testing procedures shall be performed as specified by IDEA-STD-1010, Acceptability of Electric Components Distributed in the Open Market. Inspections shall be performed using IDEA-STD-1010, (Inspection Process Checklist) as a guide. The resulting reports will be supplied for each unique code or lot code. At a minimum, the following tests should be completed. Additional tests/inspections may be required as needed.

- 1. GIDEP and/or ERAI search by date code / lot code.
- 2. Photographs Ref. IDEA-STD-1010, 9.1
- 3. Solvent Test Ref. IDEA-STD-1010.10.3.2
- 4. Solderability Test (Ref.: JEDEC JESD22-B102 or equivalent)
- 5. Blacktop Tests (Surface Test and Scrape Test)

- **Q18 RoHS CERTIFICATE OF COMPLIANCE:** Supplier shall provide certification with each shipment demonstrating compliance with the (latest version of) ROHS Directive. Statement of RoHS compliance may be provided via a separate RoHS certificate or within a standard certificate of conformance with an explicit statement that the product is compliant to (the latest version of) ROHS requirements / directives.
- Q19 TRACEABILITY Manufacturer's Date code and Lot Code (if applicable) must be on parts packaging and listed on Packing List. Parts must be used following FIRST IN FIRST OUT (FIFO) method.
- Q20 MOISTURE SENSITIVE LEVELS: Moisture Sensitive Levels must be reported on parts packaging per IPC-JSTD033 Section 3.3.3.1
- Q21 PRINTED BOARD HANDLING AND STORAGE Supplier to ensure boards are handled, stored and packaged per IPC-1601.

Q22 OBSOLESCENCE / END OF LIFE (EOL) CLAUSE:

Supplier shall perform an obsolescence / EOL analysis of the product / manufacturing Bill of Material (BOM). Analysis shall be performed once in the first two months of the execution of this purchase order and then at an interval not to exceed 12 months from the previous analysis. Analysis shall be done on any items added to the product / manufacturing BOM following purchase order award.

The purpose of the analysis is to categorize every item in the product BOM as follows:

- Known obsolescence / EOL concern: component(s) no longer in production by the manufacturer.
- Potential obsolescence / EOL concern: component(s) nearing the end of their life cycle. The manufacturer has plans to discontinue component(s) within the next 12 months at a minimum, and/or up to the next four years.
- Small or no obsolescence / EOL concern: verified by the component(s) manufacturer that component(s) will be available for the next 12 months at a minimum.

Supplier shall provide options and recommendations to obsolescence / EOL issues to the Subcontract point of contact.

Supplier to deliver the following data for information as required by this quality note:

- Analysis of the product / manufacturing BOM will be sent to the Subcontract point of contact.
- Supplier will report known, potential, small or no obsolescence / EOL components to the Subcontract point of contact.



NOTES

- The expected output of the analysis is a report or matrix that describes the obsolescence / EOL detail of each item in the BOM categorized as described above. The resolution of obsolescence / EOL issues may include the one-time purchase of all EOL type material, the qualification of an alternate supplier/item, and/or a redesign of effected circuit/subassembly.
- A component obsolescence management service is recommended to complete the analysis AND to provide alerts from manufacturers as the updates occur. An alternative acceptable method of complying with this requirement is for the Supplier to provide the BOM to the Buyer (under NDA) for AMI to complete the analysis (for the initial and subsequent intervals, if desired).

Q23 MANUFACTURING / INSPECTION / TEST DATA:

Supplier shall provide variable data (such as leak rate), as requested / specified in purchase order.

Q24 REACH:

REACH: Concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (EC1907/2006) as of 17 Jan 2023, the ECHA had identified 233 "candidate" Substances of Very High Concern (SVHC). Annex XVII to REACH includes all the restrictions adopted in the framework of REACH and the previous legislation, Directive 76/769/EEC.

It is anticipated that substances used in our products will be registered by raw material manufacturers within our supply chain.

Supplier furnished analyses must ensure that all photo sensing devices and cables manufactured by GPD Optoelectronics Corporation do not contain any of these SVHC's in any concentration above 0.1%. GPD suppliers must hereby certify that their products or materials are in full compliance with all aspects of REACH Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18 December 2006, concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

Q25 NADCAP Certification

Nadcap (National Aerospace and Defense Contractors Accreditation Program) is an industry-managed approach to conformity assessment of 'special' processes. Nadcap Approved Suppliers follow procedures in the workplace considered to be of "the highest benchmark", guaranteeing favorable client satisfaction resulting from adherence to the Nadcap requirements.

GPD Optoelectronics Corporation provides industry leading components for communication, defense, and aerospace system manufacturers. When this quality provision is applied to a purchase order for materials and components used in GPD products, GPD has determined the requirement for its Supplier to demonstrate their current NADCAP certification and qualified certificate.

End of Document: