



PRODUCTION PART APPROVAL PROCESS (PPAP) CHECKLIST FOR SUPPLIERS

PPAP level 2 to 5 packages to be submitted for approval to appropriate Supplier Quality Engineer 10 days prior to PPAP required date. This Checklist must be part of the PPAP

Reason for submission:

Supplier Name: Supplier code: PPAP level:

Submission Agreement	Included in PPAP?	Part Name:	<input type="text"/>		
		Part Number:	<input type="text"/>		
		Engineering Release Level:	<input type="text"/>	Date:	<input type="text"/>

Yes

Index Page - this Osram PPAP Checklist is recommended

Yes

1. Design Records of Saleable Product

Osram Released Engineering Specification / Drawings
Latest PO copy or Purchasing Agreement - the one received from Osram on the specific PN

2. Approved Engineering Change Documents if applicable

Drawings at the latest released level
SCR approved by all customer functions as specified on SCR form
ECN if applicable

Approved before PPAP submission

3. Customer Engineering approval, if required

4. Design FMEA, only if supplier is design responsible

5. Process Flow Diagrams

Detailed Flow Diagram to Osram's dock

6. Process FMEA - in accordance with AIAG manual, current edition

Including Shipping, Handling, Warehousing, Packaging, and Labelling (including Bar Coding labelling)

7. Control Plan

- a. Pre-Launch (component PV test plan)
- b. Production (production process controls & in process test plans)
- c. Safe Launch Plans

8. Measurement System Studies (Gage R&R)

Gage R&R < 10% , as 10X3X3 (10 parts X3 operators X3 measurements per part per operator)
Address all 10%< R&R <30% (AIAG MSA Manual, current edition)
Gage R&R may be performed on Total Variation (TV) or Tolerance band as appropriate
Note: Minitab results/analysis is preferable

9. Dimensional Results

- a. Variable data in tabular Summary Format (according to PPAP AIAG manual) - with 100 % in tolerance results 100% layout of minimum 6 parts for each unique manufacturing process (lines, molds, patterns or dies, cavities, furnaces). Number of layout parts may be modified with Osram approval
- b. Drawing numbered to correlate with submitted dimensional results and drawing notes
Note: Data cannot be older than one year
Note: Any surrogate data must be approved by Osram's Supplier Quality office
Note: Layout parts should be serialized and traceable to the dimensional layout report
Note: All Drawing's notes should be included in the Dimensional Report

10. Records of Material/ Performance test results

Data should be collected from Production Trial Run parts (per AIAG APQP/Control Plan Manual, current edition)
Any material certification cannot be older than one year (per AIAG PPAP manual, current edition)
Any surrogate data must be approved by Osram's Product Engineering office

Test Results need to include:

- Copy of the **Material Specification** called out on the drawing (**MUST ALWAYS BE INCLUDED**)
- **Material Certification** with test results (use tabular format from AIAG PPAP manual, current edition)

Submission Agreement	Included in PPAP?
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Part Name:	
Part Number:	
Engineering Release Level:	Date:

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- 11. Initial Process Study**
- a. Data should be collected using at least 25 subgroups and a subgroup size of at least 5 for a minimum of 125 measurements.
 - b. Acceptable short term capability studies should prove a Ppk/Cpk ≥ 1.67. 100% in process inspection needs to be in place if Ppk/Cpk ≤ 1.67.
 - c. Long term capability studies are acceptable at Ppk/Cpk ≥ 1.33. 100% in process inspection needs to be in place if Ppk/Cpk ≤ 1.33.

d. When reporting Pp and Ppk, calculate/estimate Sigma as: $s = \sqrt{\frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n-1}}$
 When reporting Cp and Cpk, calculate/estimate Sigma based on the control charts used:
 I. For Xbar-R charting, s = Rbar/d2
 II. For I-MR charting, s = MRbar/1.128
 Ppk, Pp - need to be reported for initial PPAP submissions or for new processes
 Cpk, Cp - need to be reported on established processes. These processes MUST be stable/in control

Note:
 * The statistical Capability study must show statistical charts (per AIAG PPAP and SPC requirements)
 * Number of parts may be modified with approval from Osram. Attach approval if applicable

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12. Qualified Laboratory Documentation
 Certification or National Equivalent or Laboratory Scope for supplier providing results

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13. Appearance Approval Report, (AAR) if applicable (per AIAG requirement)

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14. Sample Product (Qty: _____)
 (specify how many samples to be sent to customer's plant according to customer's plant direction)

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15. Master Samples (Qty: _____) (specify how many master samples are retained at the manufacturing site)

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16. Checking Aids (e.g. documentation of checking fixtures, mounting box, etc.)

17. Records of Compliance with Customer-Specific Requirements
 Comment:

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17.1. Run at Rate data from production trial run (as required by Supplier Quality Engineer)
 CV (Capacity Verification) calculation - use form on tab "17.1 CV calculation form"

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17.2. Evidence of packaging approval - use form on tab "17.2 Packaging Form"

Approved before PPAP submission

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17.3. Evidence of sub-supplier PSW Approval

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17.4. Evidence of IMDS submission at www.mdssystem.com/index.jsp

Approved before PPAP submission

Proof of IMDS acceptance
 - Screen dump from Osram IMDS showing data is accepted
 - E-mail from Osram IMDS analyst when alternate submission method is used.
 - Use account # 6856

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17.5 Survey for special processes (CQI-9, CQI-11, CQI-12, CQI-15, etc) as required and ISO 9001/IATF16949 compliance records

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17.6 Conflict Minerals Report as required

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17.7 Supplier Functional Check Report (SFCR) - use form on tab "17.7 SFCR"

Approved before PPAP submission

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17.8 Customer Tool identification picture

Yes	
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18. Part Submission Warrant (PSW) - Use form in tab "18. Part Submission Warrant"

Warrant to specifically indicate, under "Comments", details regarding process, line, tool, furnace #, cavities, names of raw material suppliers as appropriate

Submission
Agreement

Included
in PPAP?

Part Name:

Part Number:

Engineering Release Level:

Date: