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| 文件修訂履歷 | | | | | | | |
| 版本 | 修改頁次 | 生效日期 | | 修訂內容敘述 | | | 制/修訂者 |
| 1 | All | 2002/2/8 | | 第一次發行 | | | ─ |
| 2 | All | 2002/4/25 | | PCO-007 | | | ─ |
| 3 | 2 | 2006/3/8 | | 增加5.1.2.1 & 5.1.5.1 綠色產品管制 | | | ─ |
| 4 | 2~3 | 2007/4/11 | | 3.5新增  5.1.4 & 5.2.2內容增加 PCO-0282  5.3.1 內容修改  7.3新增 | | | ─ |
| 5 | 2 | 2008/12/9 | | 修改內容 (PCO-0457)  5.1.4 內容修正 (將作業員修正為產線組長)  5.3.2內容修正 (將試產研討會修正為試產檢討會) | | | ─ |
| 6 | All | 2010/4/29 | | 1.制定部門由工程部修改為產品開發部.  2.變更文件名稱：由「新機種導入管制程序」變更為「新產品設計管制作業程序」.  3.修改文件內容以符合現況作業. | | | ─ |
| 7 | All | 2011/6/27 | | 修改文件內容以符合現況作業  修正表單編號以及表單名稱 | | | ─ |
| 8 | All | 2012/2/17 | | 1.變更文件名稱:由「新產品設計管制作業程序」變更為「新產品開發作業程序」  2.變更內容以符合現況作業流程.  3.新增表單:QED-061A, QED-062A, QED-063A | | | ─ |
| 9 | All | 2012/9/7 | | 修改文件內容以符合現況作業 | | | ─ |
| 10 | All | 2013/4/8 | | 1.修改5.1.1確認這些審核項目均已完成後經業務主管或研發工程主管核准後....  2.修改5.3.1...依照”模具管理程序”進行開模及試模作業  2.修改5.4.3 ....依”製程中檢驗管理程序”進行.....  3.修改5.5.4.1依”進料檢驗程序”及”製程中檢驗.... | | | ─ |
| 11 | 4~9 | 2017/1/3 | | 5.2 P2、5.3 P3、5.4 P4等階段表格內, 新增QED-066 PSIP Lighting Only\_照明專用項目, 以及7.表單新增此表單 | | | 張采璿 |
| 12 | All | 2017/12/11 | | ISO改版，更新文件格式與編號與修改內容 | | | 吳健君 |
| 13 | All | 2019/7/17 | | 新增英文翻譯 | | | 玉慕凱 |
| 14 | 14,21 | 2020/2/3 | | 新增跨部會光學定版會議紀錄checklist表單 | | | 游尚儒 |
| 15 | 10,11,21 | 2021/3/24 | | 1.修改5.2.1內容以符合現況作業  2.取消7.2 製造與品保評估 (P2-RD02-F02),  變更為製造可行性評估(P2-RD10-F27) | | | 胡惠敏 |
| 16 | 14,21 | 2022/11/22 | | 1.修改5.4.1.4 跨部門定板會議變更為跨部會定版會議  2.新增表單 7.13 跨部會光學定版會議紀錄Checklist(非顯示器機種使用)(P2-RD02-F13) | | | 張采璿 |
| 17 | All | 2023/9/13 | | Review內容後無需修改，僅更新文件格式 | | | 林佳鴻 |
| 核准 | | | 審核 | | 制訂 | DCC 發行 | |
|  | | |  | |  |  | |

1.目的(Purpose)：

規範本公司各產品在研發/開發時，防止各階段人力、財力的浪費並提昇產品品質創造公司利潤，使成本減至最低，並在量產前檢討其可能發生之問題，給予及早修正改善、以確保公司之研發/開發能力達成，與各單位發展其工作時有關研發/開發之保證得以達成，以其滿足客戶需求，提高公司之研發/開發競爭能力，並確保產品品質可靠度與完美性。

(Standardize the company's products in the R & D / development, prevent waste of manpower and financial resources at all stages and improve product quality to create company profits, minimize costs, and review possible problems before mass production, giving early correction and improvement, To ensure that the company's R&D/development capabilities are met, and the R&D/development assurances that each unit develops its work can be achieved to meet customer needs, improve the company's R&D/development competitiveness, and ensure product quality reliability and perfection.)

2.範圍(Range)：

凡本公司因應市場之需求，及主管與研發/開發設計者之構想，客戶委託之產品、新機種或原有機種改良，而生產製品之設計均屬之。

(In response to the needs of the market, and the concept of the supervisor and the R&D/development designer, the company entrusts the product, the new model or the original organic species to be improved, and the design of the manufactured product belongs to it.)

3.權責(Responsibilities)：

3.1研發工程 (R&D)：

負責主辦，於業務接到客戶需求時審查其相關技術規格，研判公司內部研發能力是否可達成客戶所有需求及評估產品的生命週期，並進行研發/開發新產品、新機種或原有機種改良，由工程處主管指派產品工程師為該機種擔當，協助各開發專案由專案啟動開始至MP階段之各階段流程管控，當專案進入MP階段時，則彙整所有工程研發相關資料給予業務擔當做MP管控。

(Responsible for hosting, reviewing relevant technical specifications when receiving business needs from the business office, judging whether the company's internal research and development capabilities can meet all customer needs and assess the product life cycle, and research and development / development of new products, new models or original organic species improvement The head of the engineering department assigns the product engineer to take charge of the model, assisting the development and control of each development project from the start of the project to the stage of the MP phase. When the project enters the MP phase, it will collect all the engineering research and development related materials to give the business responsibility to do MP control.)

3.2業務(Sales)：

提供客戶契約所須之相關技術規格，協助研發工程產品工程師與客戶端進行技術規格之澄清，於新產品開發階段至量產階段之相關作業時程進行進度監控，以滿足業務需求。

(Provide relevant technical specifications required by the customer contract, assist the R&D engineering product engineer and the client to clarify the technical specifications, and monitor the progress of the relevant operation time from the new product development stage to the mass production stage to meet the business needs.)

3.3製造(MFG)：協助研發工程相關研發程序及產品試作、量試、量產相關作業。

(Assist in R&D engineering related R&D procedures and product trials, quantitative tests, and mass production related operations.)

3.4品保(Quality)：協助研發工程之研發相關規格確認與產品驗證作業。

(Assist in R&D engineering related specification validation and product verification operations.)

3.5資材(MAT)：

負責協辦各階段新產品材料跟催、取得評估新產品材料的生命週期，及廠商聯絡事宜。

(Responsible for coordinating new product materials and reminders at all stages, obtaining a life cycle for evaluating new product materials, and contacting manufacturers.)

4.定義：

4.1 GP：Green Product 綠色產品

4.2 HS：Hazardous substance 危害物質

4.3 HSF：Hazardous substance free無危害物質

4.4新產品(New Product)：凡以下三種類型的產品研發或開發皆需符合【新產品開發作業程序】範圍。(All three types of product development or development are subject to the "new product development operating procedures" scope.)

4.41新型產品(New Product)：

與現有產品不同應用領域、性質或技術之產品。(A product that differs from the existing

product in the field of application, nature or technology.)

4.4.2新機種(New Project)：

原有產品大幅變更或重新設計之產品

(Products whose original products have been substantially changed or redesigned.)

例如，相同產品類別但尺寸，或厚度不同之機種。

(For example, models of the same product category but of different sizes or thicknesses.)

4.4.3機種改良(Model improvement)：

指原有產品小幅變更，而重新編碼之產品

(Refers to a small change in the original product, and the re-encoded product)

例如，由相同機種衍生之機種改良。

(For example, models derived from the same model are improved.)

4.5 P1\_評估階段(Evaluation stage)：

評估市場、利潤、規格、技術、設備、品保，確保接案合理性。

(Evaluate the market, profit, specifications, technology, equipment, and quality assurance to ensure

the reasonableness of the case.)

4.6 P2\_設計階段(Design phase)：

工程端接收客戶規格需求or市場需求規格，進行圖面設計並邀請相關單位召開會議檢討設計內容，以確保設計內容符合實際製作之可行性。

(The engineering end accepts the customer specification requirements or market demand specifications, carries out the drawing design and invites the relevant units to hold a meeting to review the design content to ensure that the design content is in line with the feasibility of actual production.)

4.7 P3\_Engineer Verification Test (工程驗證測試(EVT))階段：

驗證新產品設計的可行性，及檢視設計是否符合客戶規格。

(Verify the feasibility of new product designs and see if the design meets customer specifications.)

4.6 P4\_Design Verification Test (試作(DVT))階段：

驗證新產品之尺寸、功能，將設計及製造問題找出，以確保所有設計皆符合規格，且可生產。

(Verify the size and functionality of the new product and identify design and manufacturing issues to

ensure that all designs meet specifications and are manufactured.)

4.8 P5\_ Production Verification Test (量試(PVT))階段：

新產品依所需製程、材料規劃完成後，進行量產前符合生產標準作業指導或作業規範之生產流程測試，以驗證生產治工具、檢驗測試治工具及生產設備之數量是否符合量產的產能需求。

(After the new product is completed according to the required process and material planning, the production process test shall be carried out in accordance with the production standard operation instructions or operation specifications before mass production to verify whether the quantity of production and treatment tools, inspection and test tools and production equipment meet the mass production capacity.)

4.9 P6\_量產(MP)：

產品於開發試模及量產試作後，由製造工程部主導進行大量生產作業。

(After the product development test and mass production test, the manufacturing engineering

department led the mass production operation.)

4.10 開發(Evolution)：

依客戶或市場需求之規格，進而開發之產品。

(Products developed according to customer or market requirements.)

4.11零件承認書(Components approval sheet)：

依「樣品承認作業程序」之規定實施。

(Implemented in accordance with the "sample recognition operating procedures")

4.12產品承認書(Product approval sheet)：

由品保人員依照客戶購規及產品工程師對產品之要求撰寫「產品承認書」內容，經工程人員確認後，由業務窗口提供給客戶之工程人員予以進行本公司設計及生產的產品之承認。

(The quality assurance personnel shall write the contents of the “Product Recognition Book” according to the customer's purchase regulations and the requirements of the product engineer. After confirmation by the engineering personnel, the engineering personnel provided to the customer by the business window shall recognize the products designed and produced by the company.)

5.作業內容(Work flow)：

| 階段(Stage) | 流程(Flow chart) | 權責單位  (Responsible unit) | 作業說明  (Description) |
| --- | --- | --- | --- |
| P1  評估階段  (Evaluation stage) | 產品設計  設計  No  \*1新產品設計檢討  Yes  專案啟動  Yes  新機種導入調查評估  停止開發  開發通知  新產品開發調查  No | 業務(Sales)  工程(R&D)  品保(Quality)  製造(MFG) | 依5.1P1\_評估階段審  核項目及作業  (Review projects and  operations in  accordance with the  5.1P1\_ evaluation  phase) |
| P2  設計階段  (Design phase) |  | 工程(R&D) | 依5.2P2\_設計階段審  核項目及作業  (Review projects and  operations according  to the 5.2P2\_ design  phase) |

| 階段 | 流程 | 權責單位 | 作業說明 |
| --- | --- | --- | --- |
| P3  Engineer Verification Test  EVT階段 | \*1  Yes  No  樣品製作及驗証  試作前審查 | 工程(R&D)  品保(Quality)  製造(MFG) | 依5.3P3\_Engineer Verification Test (工程驗證測試(EVT))階段審核項目及作業  (Review projects and  operations in accordance  with the  5.3P3\_EngineerVerification  Test (EVT) phase.) |
| P4  Design Verification Test  DVT階段 | 產品試作  試作後檢討  量產前審查  Yes  No  No  Yes | 製造(MFG)  工程(R&D)  資材(MAT)  品保(Quality) | 依5.4P4- Design Verification Test (試作(DVT))階段審核項目及作業  (Review projects and operations in accordance with the 5.4P4-Design Verification Test (DVT) phase) |

| 階段 | 流程 | 權責單位 | 作業說明 |
| --- | --- | --- | --- |
| P5  Production Verification  Test  PVT階段 | 產品量試  量試後檢討  量產  No  No  Yes  Yes | 製造(MFG)  工程(R&D)  品保(Quality) | 依5.5 P5\_ Production Verification Test (量試(PVT))階段審核項目及作業  (Review projects and  operations in  accordance with the  5.5 P5\_ Production  Verification Test  (PVT) phase.) |
| P6  MP  量產階段 | 正式量產 | 製造(MFG)  工程(R&D)  業務(Sales) | 依5.6P6\_MP (量產)階段作業  (According to the  5.6P6\_MP) |

5.1 P1\_評估階段審核項目及作業(Evaluation phase and project review)

5.1.1業務(Sales)

5.1.1.1經取得客戶規格、圖面或經市場需求評估時，提出 新機種導入調查評估 並提出已彙整之，經由業務人員、研發工程、製造與品保共同評估之 工程研發評估 及製造可行性評估，做為 新機種導入調查評估 附件，評估項目亦包含內部人力、製程、軟硬體能力的評估，需考量是否需要尋求引用外部資源。完成評估後由業務主管與研發工程主管共同決議是否進行機種接案。

(Upon obtaining the customer's specifications, drawings or market demand assessment, the new model is introduced into the survey and evaluation and proposed to be consolidated. The R&D evaluation and manufacturing and evaluation jointly conducted by the staff of the business department, the R&D engineering department, the manufacturing department and the quality assurance department The quality assurance assessment is used as a new model to introduce the survey evaluation and evaluation. The evaluation project also includes internal manpower, process, and software and hardware capabilities. It is necessary to consider whether it is necessary to seek external resources. After the assessment is completed, the head of the business department and the head of the R&D department will jointly decide whether to take the model.)

5.1.1.2業務於與客戶端進行專案承接協後，召集相關人員開立專案啟動會議 並決定專案各部門相關業務負責人員，同時記錄於開案會議記錄\_Kick Off，並且將 P1\_評估階段所需審核項目記錄於 設計開發會議，確認這些審核項目均已完成後經業務主管或研發工程主管核決後，即可進入P2\_設計階段。

(After the business is engaged in project cooperation with the client, the relevant personnel are called to open a project to start the meeting and decide the relevant business responsible personnel of each department of the project, and record it in the opening meeting record \_Kick Off, and the P1\_ evaluation phase required review project Recorded in the design and development meeting, confirm that these audit projects have been completed and then approved by the head of the business department or the head of the R&D engineering department, then enter the P2\_ design phase.)

5.1.2研發工程(R&D depart)：

撰寫製造可行性評估。(Write a product assurance plan.)

5.1.3品保(Quality depart) ：

撰寫製造可行性評估。(Write a product assurance plan.)

5.1.4製造(MFG)：

撰寫製造可行性評估。(Write a product assurance plan.)

5.2 P2\_設計階段審核項目及作業(Design phase audit project and operation)

5.2.1產品工程師於P1評估階段由業務取得客戶規格後，針對材料需符合HSF規範的材質、低汙染、低能耗、可回收的特性，完成初版設計圖面後，由研發工程召集相關單位進行新產品設計檢討，完成新產品設計檢討後，由產品工程師進行Application Form(BOM表申請)& 圖面更新。若為ODM機種則圖面更新需經由客戶確認，OEM機種則不受此限制。圖面完成更新後依工程圖面文件管理程序進行圖面、材料清單BOM、PSIP等相關工程文件資料更新與發行作業。 (若產品開發負有研發設計之責或客戶要求時則須撰寫DFMEA)

(After obtaining the customer specifications from the business department in the P1 evaluation stage, The materials must conform to the HSF specification material, low pollution, low energy consumption, and recyclability. After completing the preliminary design drawing, the R&D Engineering Department will convene the relevant units to conduct a new product design review. After completing the new product design review, the product engineer will apply for the Application Form (BOM form application) & drawing update. In the case of ODM models, the image update needs to be confirmed by the customer, and the OEM model is not subject to this limitation. After the drawing is updated, the engineering file data update and distribution of the drawing, bill of materials BOM, PSIP, etc. are performed according to the engineering drawing file management program.)

5.2.2產品工程師填寫新機種開發主計畫表 & 新產品開發問題檢討及改善& 新產品開發計畫進表作為專案開發過程追蹤與管控，並召開設計開發會議，且將P2\_設計階段所需審核項目記錄於設計開發會議，經研發工程主管確認完成這些審核項目後，始可進入P3\_Engineer Verification Test (工程驗證測試(EVT))階段。

(The product engineer fills in the new model development master plan & new product development problem review and improvement & new product development plan into the project development process tracking and control, and holds a design development meeting, and the P2\_ design phase required audit project Recorded at the design development meeting, after the completion of these audit projects by the head of the R&D Engineering, the P3\_Engineer Verification Test (EVT) phase is available.)

5.3 P3\_Engineer Verification Test (工程驗證測試(EVT))階段審核項目及作業

5.3.1研發工程(R&D depart)：

5.3.1.1光學工程師依產品規格及圖面進行光學設計，光學設計需考量高效率以符合產品生態化設計；產品工程師則依專案類別提出物料需求申請及依照模具管理程序進行開模及試模作業。

(The optical engineer performs optical design according to the product specifications and drawings. The optical design needs to consider high efficiency to conform to the product ecological design. The product engineer submits the material requirement application according to the project category and performs mold opening and trial operation according to the mold management program.)

5.3.1.2產品工程師在取得新產品各項部材後，視需求開立樣品試組申請單進行樣品製作及確認，若樣品符合客戶需求則進行送樣作業，若樣品不符合客戶需求時，則進行修改作業，且視不良狀況進行光學重新調整或機構設計變更等作業。

(After obtaining the various parts of the new product, the product engineer opens the sample test group application form for sample preparation and confirmation according to the requirements. If the sample meets the customer's requirements, the sample delivery operation is carried out. If the sample does not meet the customer's requirements, the modification operation is performed. In addition, optical re-adjustment or structural design changes are performed depending on the condition.)

5.3.1.3產品工程師(Project engineer)：

召開設計開發會議，且P3\_工程驗證測試(EVT)階段所需審核項目記錄計開發會議，經研發工程主管確認完成這些核項目後，始可進入P4- Design Verification Test (試作(DVT)階段。

(A design development meeting is held, and the P3\_Engineering Verification Test (EVT) phase is required to review the project record development meeting. After the R&D Engineering Director confirms the completion of these nuclear projects, the P4-Design Verification Test (DVT) phase can be entered.)

5.3.1.4產品工程師(Project engineer)：

依據專案問題填寫新產品開發問題檢討及改善作為專案開發過程追蹤與管控。

(Fill in the review and improvement of new product development issues based on project issues as the project development process tracking and control.)

5.4 P4- Design Verification Test (試作(DVT))階段審核項目及作業

5.4.1研發工程:主導試作事宜由製造協助研發工程進行DVT樣品試作。

R&D depart: Leading the trial work The Manufacturing Division assisted the R&D Engineering

Office in conducting DVT sample trials.

5.4.1.1研發工程針對新產品試作之產品不良、信賴性失效狀況、以及送樣至客戶端之產品驗證不良結果，進行異常分析，並依工程設計變更管制程序提出 工程變更申請進行機構設計變更或光學調整，以確認產品符合客戶需求。

The R&D Engineering Department conducts anomaly analysis on product defects, reliability failure conditions, and product verification failure results from sample delivery to the client, and submits engineering change requests for structural design changes or optical adjustments according to the engineering design change control procedures. To confirm that the product meets customer needs.

5.4.1.2新產品試作完成後由研發工程召開產品試作後檢討會議，並針對試作問題點做責任釐清，並請相關責任單位提出改善對策，待問題處理後提出重新進行新產品試作需求，以確認產品品質。

(After the completion of the new product trial, the R&D Engineering Office will hold a product review review meeting, and clarify the responsibility for the trial problem, and ask the relevant responsible units to propose improvement measures. After the problem is solved, the new product trial demand will be proposed to confirm the product quality.)

5.4.1.3新產品試作完成且問題點處理完成後，採購人員依產品種類及樣品承認管制程序向供應商提出零件承認需求，以利產品工程師於量產階段進行樣品承認作業。

(After the new product is completed and the problem is processed, the procurement personnel will submit the parts recognition requirements to the supplier according to the product type and the sample approval control procedure, so that the product engineer can carry out the sample recognition operation in the mass production stage.)

5.4.1.4產品工程師(Project engineer) ：

召開設計開發會議，且將P4\_Design Verification Test(DVT)階段所需審核項目記錄於設計開發會議；業務召開定版會議，並填寫跨部會定版會議資料，經工程處主管確認完成這些審核項目後，始可進入P5\_Production Verification Test(量試(PVT))階段。

(A design development meeting is held, and the audit items required for the P4\_Design Verification Test (DVT) phase are recorded in the design development meeting. Sales convene finalization meetings and fill in the cross-departmental finalization meeting materials. After the completion of these audit projects by the head of the R&D engineering department, the P5\_Production Verification Test (PVT) phase can be entered.)

5.4.1.5產品工程師(Project engineer)：

依據專案問題填寫新產品開發問題檢討及改善作為專案開發過程追蹤與管控。

(Fill in the review and improvement of new product development issues based on roject issues as the project development process tracking and control.)

5.4.2製造(MFG)

5.4.2.1協助於每次試作後提出試產報告及潛在之不良模式及效應分析(製程FMEA)，以為研發工程進行機種改良之依據。

(Assist in the trial report and potential adverse mode and effect analysis (process FMEA) after each trial, in order to provide the basis for the R&D engineering to improve the model.)

5.4.2.2試作後之問題點若為生產性問題，則由製造工程部人員進行夾治工具調整及作業指導書調整或人員作業手法更正。

(If the problem after the trial is a production problem, the personnel of the manufacturing engineering department will adjust the adjustment tool and adjust the work instructions or correct the personnel operation methods.)

5.4.2.3品保(Quality)：

依SIP (品質檢驗規範 )、QC工程表訂定之檢驗標準，對材料進行檢驗，以確保材料符合專案開發需求，並依製程中檢驗管理程序進行試作產品品質確認。

(According to the inspection standards set by SIP (Quality Inspection Specification) and QC Engineering Table, the materials shall be inspected to ensure that the materials meet the project development requirements, and the quality of the trial products shall be confirmed according to the inspection management procedures in the process.)

5.4.2.4資材(MAT)：

依業務提出之備料單，進行DVT階段材料提供及廠商連絡事宜，同時依需求狀況開立試產製令通知製造進行試產作業。

(According to the preparation list submitted by the business department, the material supply of the DVT stage and the contact of the manufacturer are carried out. At the same time, the trial production order is issued according to the demand situation, and the manufacturing office is notified to conduct the trial production operation.)

5.5 P5\_ Production Verification Test (量試(PVT))階段審核項目及作業

5.5.1研發工程(R&D depart)

5.5.1.1量試產後由產品工程師召開量試產後檢討會議，討論量試產品問題點，並針對量試產問題點進行責任釐清，並請相關責任單位提出改善對策，待確認其問題點已改善完成，始可移轉至量產階段。

(After the trial production, the product engineer will hold a post-production review meeting to discuss the problem of the test product, and clarify the responsibility for the trial production, and ask the relevant responsible units to propose improvement measures, and confirm that the problem has been improved. Can be transferred to the mass production stage.)

5.5.1.2若量試產品之問題點屬於產品設計問題時，則產品工程師應針對產品之設計不良問題依工程設計變更管制程序開立工程變更申請進行機構設計調整，材料調整需符合HSF規範的材質、低汙染、低能耗、可回收的特性。，並於調整完成後再次提出量試產需求，並進行圖面、材料清表BOM、PSIP進階及發行作業。

(If the problem of the test product belongs to the product design problem, the product engineer shall open the engineering change application for the design change of the product according to the engineering design change control procedure, and the material adjustment shall conform to the HSF specification material and low pollution. Low energy consumption and recyclable characteristics. And after the adjustment is completed, the volume trial production demand is again put forward, and the BOM, PSIP advanced and distribution operations are carried out on the drawings and materials.)

5.5.1.3當產品進入量試產階段時，產品工程師依「樣品承認作業程序」並依產品別進行Component Approval Sheet (零件承認)部材驗證及承認作業。

(When the product enters the pilot production phase, the product engineer performs the Component Approval Sheet component verification and recognition operation according to the “sample approval operation procedure” and the product.)

5.5.1.4產品工程師(Project engineer)：

召開設計開發會議，且將P5\_Production Verification Test(PVT)階段所需審核項目記錄於設計開發會議，經研發工程主管確認完成這些審核項目以及製造認可後，始可進入P6\_量產階段，產品工程師人員並應將專案各階段相關之工程文件資料，彙整後轉給業務擔當安排後續量產事宜。

(The design and development meeting will be held, and the audit items required for the P5\_Production Verification Test (PVT) phase will be recorded in the design and development meeting. After the completion of these audit projects and the approval of the manufacturing office, the head of the R&D engineering department will enter the P6\_ mass production stage. Engineers should also transfer the project documentation related to each stage of the project to the business to arrange for subsequent mass production.)

5.5.2業務(Sales)

5.5.2.1業務將量試產產品，送樣至客戶端給予客戶進行量試產品驗證，經客戶認證後由業務通知製造、品保及研發工程…等相關部門其驗證結果。

(The business will test the production products, send samples to the client to give customers the test product verification. After the customer certification, the business department will notify the manufacturing, quality assurance and R&D engineering department and other relevant departments to verify the results.)

5.5.2.2業務擔當於接收產品工程師彙整各階開發段工程相關文件資料後，進行量產事宜安排。(The business is responsible for the mass production matters after receiving the product engineers to collect the relevant documents of the various stages of the development section.)

5.5.2.3當機種欲移轉量產地前，則由業務召開技轉會議。

(Before the model wants to transfer the production area, the business office will hold a technical transfer meeting.)

5.5.2.4針對SOY機種, 須向客戶提出機構部品檢定申請手續(STM-0057), 並將客戶回覆之檢定結果聯絡書，作為產品承認書附件。

(For SOY models, it is necessary to submit an application for the inspection of the department's parts (STM-0057) to the customer, and to contact the verification result of the customer's reply as an attachment to the product approval.)

5.5.2.5產品工程師(Project engineer)：

依據專案問題填寫新產品開發問題檢討及改善作為專案開發過程追蹤與管控。

(Fill in the review and improvement of new product development issues based on project issues as the project development process tracking and control.)

5.5.3資材(MAT)

5.5.3.1依業務所提出之備料單，進行PVT階段材料提供及廠商連絡事宜，同時開立生產製令通知製造進行生產作業。

(According to the preparation list submitted by the business office, the material supply of the PVT stage and the contact of the manufacturer are carried out, and the production order is issued to notify the manufacturing to carry out the production operation.)

5.5.4品保(Quality)

5.5.4.1依「進料檢驗作業程序」及「製程中檢驗作業程序」，進行進料及量試產品品質確認，且於每次量試產後提出量試產良率報告。

(According to the "incoming inspection operation procedure" and the "in-process inspection operation procedure", the quality of the feed and the test product are confirmed, and the trial production yield report is submitted after each trial production.)

5.5.4.2當產品進入量產階段或客戶提出產品承認需求時，由品保人員依客戶購規及產品工程師對產品之要求進行產品承認書製作，並依客戶要求提供以書面或電子檔方式給予客戶確認，及轉由工程文管進行正式發行作業。

(When the product enters the mass production stage or the customer proposes the product recognition requirement, the product of the quality assurance department shall make the product recognition book according to the customer purchase regulations and the product engineer's requirements for the product, and provide the customer with the written or electronic file confirmation according to the customer's request. And transferred to the engineering management for official release operations.)

5.5.5製造(MFG)

主導PVT階段量試產事宜，且依各「生產作業程序」及「製程中檢驗作業程序」進行製程管制作業，並針對新產品量試產不良、以及送樣客戶回饋之新產品量試產驗證不良狀況進行異常分析，若為生產性不良則由製造工程部人員提出改善對策，並於不良點改善後再次進行量試產作業，製造工程人員於每次量試產後提出量試產報告，並進行潛在之不良模式及效應分析(製程 FMEA)改版、作業規範、指導書正式發行等作業。

(Leading the PVT stage trial production, and performing process control operations according to each "production operation procedure" and "in-process inspection operation procedure", and verifying the production of new products for the new product quantity trial production and the sample customer feedback Abnormal conditions are analyzed for abnormality. If the production is poor, the manufacturing engineering department proposes improvement measures, and after the improvement of the defective point, the quantity trial production operation is performed again, and the manufacturing engineering personnel submits the trial production report after each trial production. Conducting operations such as potential bad mode and effect analysis (process FMEA) revision, operation specifications, and official issuance of instructions.)

5.5.6設計要求(輸入) (Design requirements)

有關產品之設計要求要素，需於PSIP中加以明訂及書面記載，並做適切的選擇檢討，如各國法規，產品規格書等為設計要素。

(The design requirements of the product must be clearly and written in the PSIP, and appropriate selection and review, such as national regulations, product specifications, etc. as design elements.)

5.5.7設計結果(輸出) (Design result)

將設計要求、適合法令規定、產品有關安全及功能等，依計算及分析表達作成書面記載者皆為設計結果，例如圖面、材料清表BOM、PSIP等皆是，並依【工程圖面文件管理程序】進行工程文件製作、管制、發行等。

(Design requirements, appropriate legal requirements, product safety and functions, etc., based on calculations and analytical expressions, are written as design results, such as drawings, BOMs, PSIP, etc., and are managed according to engineering drawings. The program carries out the production, control, and distribution of engineering documents.)

5.5.8設計審查(Design review)

設計過程中應在重要階段，依本作業程序，進行設計審查的工作，及定期設計評估，同時對產品進行檢驗及試驗，以驗證原設計品質之合格性，所有設計審查、試驗及評估結果均記錄於設計開發會議中。

(The design process should be carried out at an important stage, in accordance with the operating procedures, design review work, and periodic design evaluation, while testing and testing the product to verify the authenticity of the original design quality, all design review, test and evaluation results are Recorded in the design development meeting.)

5.5.9設計變更(Design change)

設計變更之處理，依工程設計變更作業程序之規定實施。

(The design change is handled in accordance with the provisions of the engineering design

change control procedures.)

5.6 P6\_MP (量產)階段作業

5.6.1完成開發各階段作業，進入正式量產階段。

(Complete the development of each stage of the operation and enter the formal mass production

stage.)

6.相關文件/資料(Related documents)：

6.1樣品承認作業程序

6.2工程圖面文件管理作業程序

6.3試模作業程序

6.4工程設計變更作業程序

6.5模具管理作業程序

6.6 HSF限用物質管理作業規範

7.表單/附件(Attachment)：

7.1新機種導入調查評估 ( P2-RD02-F01)

7.2製造可行性評估 (P2-RD10-F27)

7.3設計開發會議記錄 (P2-RD02-F03)

7.4 DFMEA ( P2-RD02-F04)

7.5 新產品設計檢討報告-Design Review (P2-RD02-F05)

7.6 樣品試組申請單 (P2-RD02-F06)

7.7 產品承認書 (P2-RD02-F07)

7.8 新機種開發主計畫表 (P2-RD02-F08)

7.9 新產品開發計畫進度表 (P2-RD02-F09)

7.10新產品開發問題檢討及改善 (P2-RD02-F10)

7.11 PSIP Lighting Only\_ 照明專用 (P2-RD02-F11)

7.12跨部會光學定版會議紀錄checklist (P2-RD02-F12)

7.13跨部會光學定版會議紀錄Checklist (非顯示器機種使用)( P2-RD02-F13)