



FUJIKURA FIBER OPTICS VIETNAM CO., LTD.

**PURCHASE SPECIFICATION
24LC-2MPO MODULE OUTER CASE**

**Registered No. : 7-FPS-0477
Version : 1
Issued day : 01-Oct-2024**

A handwritten signature in blue ink, appearing to read 'V.A. Tuan'.

Prepared by: V.A. Tuan
Date: 01-Oct-2024

Engineer of
MDP Section

A handwritten signature in blue ink, appearing to read 'N. T. Phuong'. A red circular stamp with the text 'MDP Manager' is placed over the signature.

Checked by: N. T. Phuong
Date: 03-Oct-2024

Manager of
MDP Section

A handwritten signature in blue ink, appearing to read 'P. V. Thach'.

Approved by: P. V. Thach
Date: 03-Oct-2024

Manager of
Design Engineering Division

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I. PURPOSE

This specification covers 24LC-2MPO MODULE OUTER CASE project that FOV (Fujikura Fiber Optics Vietnam Ltd.,) purchases from Fuji Impulse Vietnam (FIVS) company.

The part list as below:

No.	Part name	Drawing No.
1	24LC-2MPO MODULE OUTER CASE	F852500-01B

II. APPLICATION

- This Purchase Specification is applied to 24LC-2MPO MODULE OUTER CASE which will be manufactured in FIVS.
- This Purchase Specification concerns FIVS and FOV.

III. REFERENCE DOCUMENTS

+ Drawing number:

No.	Part name	Drawing No.
1	24LC-2MPO MODULE OUTER CASE	F852500-01B

+Working Instruction:

No.	Part name	Working instruction No.	Version
1	24LC-2MPO MODULE OUTER CASE	000-7-WI-1192	Latest version

- FOV : Fujikura Fiber Optics Vietnam Ltd.,
- FIVS : Fuji Impulse Vietnam company
- P/O : Purchase Order.
- QCF : Quality control flow chart.
- 4M : 4 factors that affect to a manufacturing process. Including: Machine, Material, Method, Man.
- RoHS : Restriction of hazardous substances.

IV. CONTENT**1. Structure and Composition:**

Must be followed as table-1 below:

No.	Part name	Drawing No.	Color	Material	Mark's cavity
1	24LC-2MPO MODULE OUTER CASE	F852500-01B	Black	Metal	'-

2. Quality Assurance:**2.1 Material, color, structure, function:**

- a/ Material, color, structure of product must be followed the drawing.
- b/ Function must be satisfied following the relative Working Instruction which is mentioned in this document.

2.2 Dimension and tolerance:

Dimension and tolerance of each part must be followed the drawing.

2.3 Appearance Inspection:

Must be followed the relative Working Instruction.

2.4 Action of nonconforming products:

In case if non-conforming products are detected, FIVS must act following the judgment of MDP&QA-FOV quickly. The expense cost by remaking and repair should be accepted depending on a contract of trading (remake or provide the substitutes with free of charge).

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2.5 RoHS control: Follow the RoHS standard in table 2**Table 2: RoHS standard**

No.	Substance	Europe RoHS	Remarks
1	Polybrominated biphenyls (PBBs)	1000 ppm	
2	Polybrominated diphenyl ethers (PBDEs)	1000 ppm	
3	Cadmium and its compounds (Cd)	100 ppm	
4	Hexavalent chromium compounds (Cr-VI)	1000 ppm	
5	Lead and its compounds (Pb)	1000 ppm	For chlorinated vinyl cables-300 ppm)
6	Mercury and its compounds (Hg)	1000 ppm	
7	Bis(2-ethylhexyl) phthalate (DEHP)	1000 ppm	
8	Butyl benzyl phthalate (BBP)	1000 ppm	
9	Dibutyl phthalate (DBP)	1000 ppm	
10	Di isobutyl phthalate (DIBP)	1000 ppm	
<p>* Note: For the first time of shipment, Mill sheet, RoHS CoC (Certificate of Compliance) and RoHS accurate analysis test must be attached together with the product Test Report. Beside of RoHS, other certificate/ survey regarding substance control in material will be required by FOV-QA such as chemSHERPA, 3TG, PCD... Supplier please cooperate with FOV-QA to finish this certificate/survey on time.</p>			

2.6 Trace ability:

- Establish control method such as check sheet to trace back and identify the 4M with each shipping lot is required.
- Record will be kept for at least 5 years after the date of manufacturing.
- All records during ramp up and initial mass production must be submitted to FOV before starting production follow plan.
- Test Report of product per each lot must be same format which FOV has suggested.

2.7 Any 4M change or tooling modification which may affect to Quality, supplier is required to submit the 4M change request to FOV to get the FOV approval in advance.

Using 4M change procedure of your own.

2.8 During Mass Production, due to control important (specified) dimension by Manufacturing lot, therefore:

- FIVS has to control Manufacturing Condition be stably in order to assure that important dimension is within spec.
- FIVS has to provide the Shift Lot data (Molding Condition, material lot ...) of each working – shift to FOV by writing onto test report per shipping Lot.
- FIVS has to send a copy of **Check sheet** under excel file format of FOV's QA – that Check sheet has includes evaluating standards of appearance, dimensions and function following the relative Working Instruction, and FIVS has to send that Check Sheet within 2 hours after each shipment.
- FIVS has to provide MSDS of product for the first lot.

2.9 Control limit sample

- All limit samples that FIVS use for evaluating product or semi-product during mass production, they must be approved by FOV's QAE in advance.
 - During development stage: limits samples with confirmation of FOV's MDP can be used, but just for development purpose only.
 - But for mass production stage: all limit samples must be approved by FOV's QAE.
 - It means that all limit samples used during mold/die development stage shall be re-confirmed and get final approved by FOV's QAE before using for mass production stage.
- If FIVS uses the limit samples for evaluation of mass production without approved by FOV's QAE, FIVS has to cover for all expenses which is generated by the non-conforming.

3. Inspection checklist and requirement: Must be followed as table 3 below**Table 3: Inspection checklist and requirement**

No	Inspection Items	Inspection Quantity	Remarks
1	Appearance	All/Shipping lot	New Prototype:

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	During ramp up of production	Dimension	All dimensions	N = 1 set	Parts which are submit by FIVS must be satisfied all appearance, dimension and function which indicated in drawing and WI issue by FOV.
			Specified dimensions	Additional N = 1 set	
		Functionality		N = 1 set	
2	During control of initial production Carry out on 3 first working day	Appearance		All/Shipping lot	Transfer of production plant.
		Quantity		All/Shipping lot	
		Dimension	All dimensions	None.	
			Specified dimensions	Quantity 3 set /PO record actual value	
		Functionality		All/Shipping lot	
3	During mass production	Appearance		All	
		Quantity		All/Shipping lot	
		Dimension	All dimensions	None.	
			Specified dimensions	Quantity 3 set /PO record actual value	
		Functionality		All/Shipping lot	

Note:

- ❖ All dimensions and appearance are provided in drawings. Specified dimensions & Functionality are referred to Working Instruction.
- ❖ If having another idea for Inspection quantities, FIVS should submit a report to FOV to get FOV's approval.
- ❖ Below gives the definition of lot.
Shipping lot: Same order with same shipping date.
- ❖ All Specified dimensions measurement methods must be prepared by FIVS and be approved by MDP. The method of measurement must be proposal following the form below:

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PART MEASUREMENT STANDARD																	
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Customer	<div>Measuring method</div> <div>Bước 1: Bước 2: ...</div> <div>Hình minh họa</div> <table border="1"> <thead> <tr> <th colspan="2">Supplier side</th> <th colspan="2">FOV side</th> </tr> <tr> <th>Prepared</th> <th>Checked</th> <th>MDP checked</th> <th>QAS approved</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>					Supplier side		FOV side		Prepared	Checked	MDP checked	QAS approved				
Supplier side						FOV side											
Prepared						Checked	MDP checked	QAS approved									
Model																	
Drw. No.																	
Part Name																	
No. of Cav.																	
Material																	
Checkpoint						No.	Spec	USL	LSL								
Equipment																	
Measurement Condition																	
How to calibrate Measurement Equipment	Calibration Tool	Calibration Frequency															
Remark:																	

4. **Packing and indication:**

Manufacturer has to follow exactly all the sequences of packing method. In case of any change of packing method or found any unsuitable operations, manufacturer must inform to FOV about these changes. Please apply “4M Amendment” procedure.

4.1. **Packing Method:**

- The product should be packaged to prevent any degradation in quality such as be damaged, dirty appearance, discoloring... during transportation and storage.
- Product name, drawing No., quantity, manufactured date and name shall be marked in a prominent place of package.
- Pay attention to the history of manufacturing, FIVS must package product following FIFO (First In –First Out) rule.
- If having another idea of packing spec, FIVS should submit it to FOV to get FOV’s approval.

Table 4: Packing

Items	Conditions
Packing	<ul style="list-style-type: none"> - Each type of parts must be packaged into PE bag with a label indicates molding lot number. These packages are covered by air bubble sheet carefully before put them into packing box (to prevent the package touch directly onto inner wall of packing box). - The box sizes are chosen for handling easily. - Fulfill all gap inner packing box, between package to package and between package with wall of packing box (to prevent product be sliding during transportation and storage). - The other follows Vendor’s Standard.
Store	Keep in dry area, indoor.
Barcode	If FIVS do not find out how to create barcode, FIVS may contact QA’s PIC to gain FOV’s instruction.

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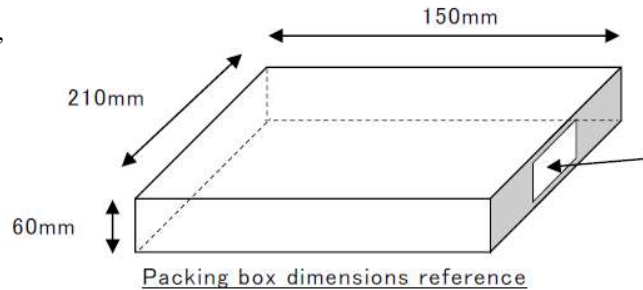
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Packing image of 24LC-2MPO MODULE OUTER CASE



Apply air bubble sheet for Outercase wrapping, then put product in individual carton box.



4.2 Label indication:

1. Attached label at the length carton box side
2. Align label at center of length-side
3. Use a transparent sticking-plaster

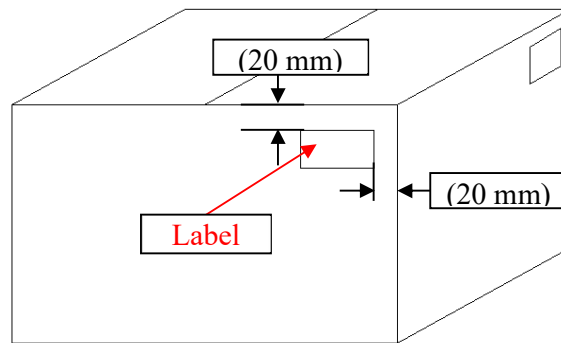


Figure 1: The position of label on the shipping box

Carton Label has some information as below: There are 2 versions which can be used but Vietnamese version is recommended.

❖ Vietnamese version:

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Nhãn thùng

Tem nhận dạng - FOV			
Số Invoice			
Ngày giao hàng	Lần 1	Lần 2	Lần 3
Code vật tư của FOV			
Tên vật tư			
Số bản vẽ			
Số Lot			
Số lượng/lot			
Số lượng/thùng			
Số thứ tự thùng			
Các thông tin khác			
Barcode			
Số Molding Lot			

Hướng dẫn cách điền thông tin

- Số Invoice: Ghi số invoice nếu có
- Dùng con dấu số để thể hiện ngày giao hàng.
- Lần giao hàng đầu tiên trong ngày, đóng vào ô "Lần 1"
- Lần giao hàng thứ 2 trong ngày, đóng vào ô "Lần 2"
- Code vật tư của FOV
- Tên vật tư của FOV
- Số bản vẽ FOV đặt hàng
- 6 & 7. Số Lot & số lượng/lot
- Thể hiện tất cả số lot và số lượng tương ứng với từng lot có trong thùng
- Số lượng/thùng: số lượng tổng có trong thùng
- Số thứ tự của thùng trong 1 lần giao hàng
- Một số thông tin khác supplier cần để kiểm soát
- Phần in barcode: voi format như sau
(áp dụng cho các vật tư không sử dụng bịch & chỉ có 1 code & 1 lot trong 1 thùng)

Số Molding Lot

Sử dụng font barcode: 3of9 hay 128

FOV recommend: sử dụng font 128 vì có chức năng sửa sai

English version:

Outer carton label

Indication label - FOV			
Invoice number			
FOV material code			
Material name			
Drawing number			
Lot No			
Quantity/lot			
Quantity/carton			
Carton number			
Other information			
Barcode printing area			
Molding Lot No.			

Instruction

- Invoice number: Indicated invoice number
- FOV material code: Indicate material code of FOV
- Material name: Indicate material name
- Drawing number: Indicate drawing number of this material
- 5 & 6: Lot no & quantity/lot
- Indicate all lot no & quantity of each lot on this carton
- Quantity/carton: indicate total quantity of 1 carton
- Carton number: indicate the ordinal number of this carton
- other information (if any)
- Barcode printing area:
(apply for only 1 code & 1 lot/carton and for material that not packing in bags)

Molding Lot No.

Use barcodefont: 3of9 or 128

FOV recommend: using font 128 because this font has corrective function

5. **Delivery:**

The quantity, date and place of delivery shall be shown in table below:

Table5: Delivery

No.	Name of items	Quantity & Date of delivery	Place of delivery
1	According to table 1	According to Purchase order	FOV's address

6. **Document requirements:**

- Manufacturer **has to submit the production plan and relevant documents to FOV**, such as:
 - QCF document: must be sent before mass production.
 - Test Report: must be sent together with product for each shipment including records of lot number of product, material name, material code, kind of material, lot number of raw material, machine name, etc.
 - Record of machine's working condition.
- Manufacturer **should not perform production without the approval from FOV**.
- FOV will conduct necessary audit towards the manufacturer in case of any changes of manufacturing process that affect to the quality of product sent to FOV.

7. **Attached drawing:** (if any)

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REVISION HISTORY						
Date	Person	Version	Description		Reason of change	Requester
			Old contents	New contents		
01-Oct-2024	V. A. Tuan	1		First time issue		N.T.Phuong