



FUJIKURA FIBER OPTICS VIETNAM CO., LTD.

PURCHASE SPECIFICATION
COUPLING (GT) All Types

Registered No. : 7-FPS-0460
Version : 3
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A handwritten signature in blue ink, appearing to be 'T.Q.Binh'.

Prepared by: T.Q.Binh
Date: 04-Oct-2024

Engineer of
MDP Section

A handwritten signature in blue ink, appearing to be 'N. T. Phuong', with a red circular stamp that reads 'MDP Manager' and 'FOV'.

Checked by: N. T. Phuong
Date: Via DMS

Manager of
MDP Section

A handwritten signature in blue ink, appearing to be 'P. V. Thach', with a red circular stamp that reads 'V-Thach'.

Approved by: P. V. Thach
Date: Via DMS

Manager of
Material Development Div

TABLE LIST

Table 1: List of Parts	3
Table 2: RoHS standard	4
Table 3: Inspection Checklist and requirement.....	5
Table 4: Packing	6
Table 5: Delivery.....	8

COUPLING (GT) All Types**PURCHASING SPECIFICATION: 7-FPS-0460**

Version: 3

Page: 3/9

Effective date: Via DMS

I. PURPOSE

This specification covers COUPLING (GT) All Types project that FOV (Fujikura Fiber Optics VietNam Ltd.,) purchases from Echigo VietNam Joint stock company

The part list as below:

No.	Part name	Drawing No.
1	COUPLING (GT) with key (PBT)AR	CSVM2-219K3
2	COUPLING(GT) (PBT) AR	CSVM2-221D3

II. APPLICATION

- This Purchase Specification is applied to all types of COUPLING (GT) All which will be manufactured in ECHS.
- This Purchase Specification concerns ECHS and FOV.

III. REFERENCE DOCUMENTS

+ Drawing number:

No.	Part name	Drawing No.
1	COUPLING (GT) with key (PBT)AR	CSVM2-219K3
2	COUPLING(GT) (PBT) AR	CSVM2-221D3

+Working Instruction:

No.	Part name	Working instruction No.	Version
1	COUPLING (GT) with key (PBT)AR	000-7-WI-1156	Latest version
2	COUPLING (GT) (PBT)AR	000-7-WI-1193	Latest version

3

- FOV : Fujikura Fiber Optics Vietnam Ltd.,
- ECHS : Echigo VietNam Joint stock 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:

3

No.	Part name	Drawing No.	Color	Material	Mark's cavity	Remark
1	COUPLING (GT) with key(PBT)AR*Green	CSVM2-219K3*GN	Green	PBT NANYA 1210G6	1,2,3,4	Mold#1
2	COUPLING (GT) with key(PBT)AR*Blue	CSVM2-219K3*BL	Blue	PBT NANYA 1210G6	1,2,3,4	
3	COUPLING(GT) (PBT) AR	CSVM2-221D3	Blue	PBT NANYA 1210G6	1,2,3,4	
4	COUPLING (GT) with key(PBT)AR*Green	CSVM2-219K3*GN	Green	PBT NANYA 1210G6	5,6,7,8	Mold#2
5	COUPLING (GT) with key(PBT)AR*Blue	CSVM2-219K3*BL	Blue	PBT NANYA 1210G6	5,6,7,8	
6	COUPLING(GT) (PBT) AR	CSVM2-221D3	Blue	PBT NANYA 1210G6	5,6,7,8	

2. Quality Assurance:

COUPLING (GT) All Types**PURCHASING SPECIFICATION: 7-FPS-0460**

Version: 3

Page: 4/9

Effective date: Via DMS

2.1 Material, color, structure, function:

- a/ Material, color, structure of product must be followed the drawing. Resin must be original.
 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, ECHS must take action 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).

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 chloridated 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	Diisobutyl phthalate (DIBP)	1000 ppm	
* 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.			

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 provided.

2.7 Any 4M change or die 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:

- ECHS has to control Manufacturing Condition be stably in order to assure that important dimension is within spec.
- ECHS 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.
- ECHS 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 ECHS has to send that Check Sheet within 2 hours after each shipment.
- ECHS has to provide MSDS of product for the first lot.

2.9 Control limit sample

- All limit samples that ECHS use for evaluating product or semi-product during mass production, they must be approved by FOV's QAE in advance.

COUPLING (GT) All Types**PURCHASING SPECIFICATION: 7-FPS-0460**

Version: 3

Page: 5/9

Effective date: Via DMS

- During mold/die 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 ECHS uses the limit samples for evaluation of mass production without approved by FOV's QAE, ECHS 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	During ramp up of production	Appearance		All	New molding die:
		Dimension	All dimensions	N = 3 pcs/ Cavity	Parts which is submit by ECHS must be satisfied all appearance, dimension and function which indicated in drawing and WI issue by FOV.
			Specified dimensions	Additional Total 5 pcs/ Cavity	
		Functionality		N = 5 pcs/ Cavity	
2	During control of initial production	Appearance		All	Transfer of production plant.
		Quantity		All/Shipping lot	
		Dimension	All dimensions	None.	
			Specified dimensions	N = 1 shot/ working day	Major repair of Manufacturing of molding die.
	Carry out on 3 first working day	Functionality		N = 1 shot/ working day	
3	During mass production	Appearance		N = all/ Molding lot	
		Quantity		All/Shipping lot	
		Dimension	All dimensions	None.	
			Specified dimensions	N = 1 shot/ working day	
		Functionality		N = 1 shot/ working day	

Note:

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

COUPLING (GT) All Types

PURCHASING SPECIFICATION: 7-FPS-0460

Version: 3

Page: 6/9

Effective date: Via DMS

PART MEASUREMENT STANDARD					
PAGE:1/...					
Customer					
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:					

Measuring method

Bước 1:
 Bước 2:
 ...

Hình minh họa

Supplier side		FOV side	
Prepared	Checked	MDP checked	QAS approved

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:**a/ **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, ECHS must package product following FIFO (First In –First Out) rule.
- If having another idea of packing spec, ECHS should submit it to FOV to get FOV’s approval.
- One packing box only put one mold and correctly identify the cavity on the label of packing box

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	<u>If ECHS do not find out how to create barcode, ECHS may contact QA’s PIC to gain FOV’s instruction..</u>

COUPLING (GT) All Types

PURCHASING SPECIFICATION: 7-FPS-0460

Version: 3

Page: 7/9

Effective date: Via DMS

b. PE bag label has information as bellow: There are 2 versions which can be used but Vietnamese version is preferred.

❖ Vietnamese version:

Nhãn bịch

Tem nhận dạng - FOV	
Code vật tư của FOV	
Tên vật tư	
Số bản vẽ	
Số Molding Lot	
Số lượng/bịch	
Barcode	
Số Molding Lot	

Hướng dẫn cách điền thông tin

1. Code vật tư của FOV
2. Tên vật tư của FOV
3. Số bản vẽ FOV đặt hàng
4. Số Lot: thể hiện số lot của 1 bịch
5. Số lượng/bịch: thể hiện số lượng trong 1 bịch
10. Phần in barcode: voi format như sau

Số Molding Lot

Sử dụng font barcode: 3of9 hay 128

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

❖ English version:

Label for bag

Indication label - FOV	
FOV material code	
Material name	
Drawing number	
Molding Lot No	
Quantity/bag	
Barcode printing area	
Molding Lot No.	

Instruction

1. FOV material code: Indicate material code of FOV
2. Material name: Indicate material name
3. Drawing number: Indicate drawing number of this material
- 4 & 5: Lot no & quantity/lot
- Indicate Lot no & quantity of this bag
6. Barcode printing area:

Molding Lot No.

Use barcodefont: 3of9 or 128

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

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

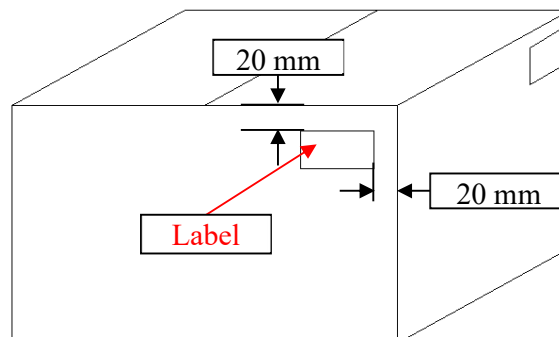


Figure 1: The position of label on the shipping box

COUPLING (GT) All Types

PURCHASING SPECIFICATION: 7-FPS-0460

Version: 3

Page: 8/9

Effective date: Via DMS

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

❖ Vietnamese version:

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

1. Số Invoice: Ghi số invoice nếu có
2. 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"
3. Code vật tư của FOV
4. Tên vật tư của FOV
5. 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
8. Số lượng/thùng: số lượng tổng có trong thùng
9. Số thứ tự của thùng trong 1 lần giao hàng
10. Một số thông tin khác supplier cần để kiểm soát
11. 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

1. Invoice number: Indicated invoice number
2. FOV material code: Indicate material code of FOV
3. Material name: Indicate material name
4. 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
7. Quantity/carton: Indicate total quantity of 1 carton
8. Carton number: Indicate the ordinal number of this carton
9. other information (if any)
10. 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)

COUPLING (GT) All Types

PURCHASING SPECIFICATION: 7-FPS-0460

Version: 3

Page: 9/9

Effective date: Via DMS

REVISION HISTORY

Date	Person	Version	Description		Reason of change	Requester
			Old contents	New contents		
09-Apr-2024	N.T.X.Tien	1		First time issue		N.T.Phuong
06-Jun-2024	N.T.X.Tien	2	CSVM2-219K3 CSVM2-221C3	Change drawing CSVM2-219K3 CSVM2-221D3	Correct drawing for current mold	N.T.Phuong
04-Oct-2024	T.Q.Binh	3	-	Add cavity 5,6,7,8 Add WI for COUPLING (GT) (PBT)AR	Update for new copy mold	N.T.Phuong