

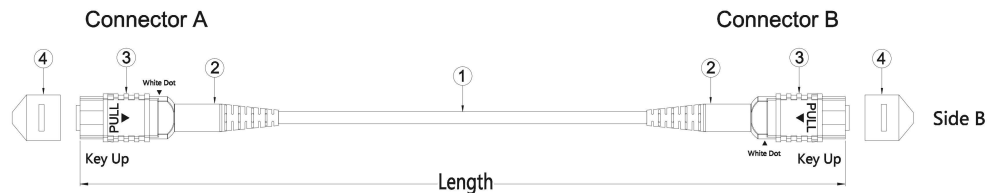


# **PRODUCT SPECIFICATION**

## **MPO/MTP PATCH CORD**

| Author | Auditor | Approver |
|--------|---------|----------|
|        |         |          |

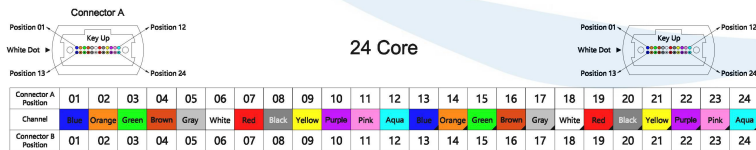
# MPO/MTP-MPO/MTP DIAGRAM



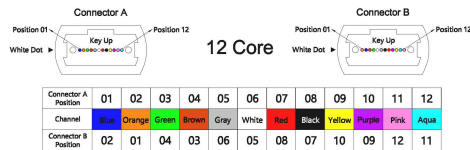
## Type A



## Type B



## Type C



| POS. | Description       | Specification               | Q.ty |
|------|-------------------|-----------------------------|------|
| 1    | Cable             | Ribbon/Miniature Cable      | 1    |
| 2    | Connector boot    | MPO/MTP boot                | 2    |
| 3    | Optical connector | MPO/MTP connector multimode | 2    |
| 4    | Dust cover        | MPO/MTP dust cover          | 2    |

| Length tolerance table |                     |
|------------------------|---------------------|
| Grade                  | Tolerance range(cm) |
| I                      | -3.0 ≤ X ≤ +5.0     |
| II                     | -5.0 ≤ X ≤ 0        |

\* Different types of patch cord will have different components. Please consult our company for details.

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|              |                            |                |        |
|--------------|----------------------------|----------------|--------|
| Product Name | MPO/MTP-MPO/MTP Patch Cord | Product Coding |        |
| Design       |                            | Material       | Date   |
| Review       |                            | Unit           | mm     |
| Approval     |                            | Scale          | Visual |



Reference Standard:

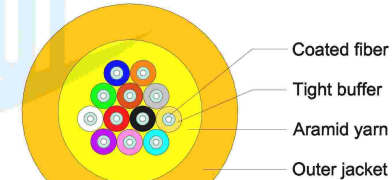
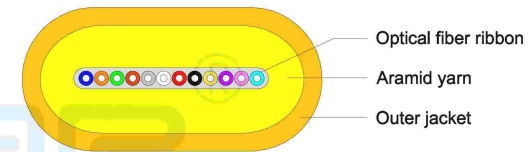
- 1.IEC 61754-7-1:2014 《Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces - Part 7-1: Type MPO connector family - One fibre row》
- 2.IEC 61754-7-2:2017 《Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces - Part 7-2: Type MPO connector family - Two fibre rows》
- 3.IEC 61754-7-3:2019 《Fibre optic interconnecting devices and passive components - Fibre optic connector interfaces - Part 7-3: Type MPO connector family - Two fibre rows 16 fibre wide》
- 4.GR 1435 《Core Generic Requirements for Multi-Fiber Optical Connectors》
- 5.YD/T 1272.5 《Optical fiber connector-part 5: Type MPO》

\* Due to different product requirements and grades, Compliance with different grades and requirements of a standard may vary.Please consult our company for details.

Reference Test Standards:

- 1.GB/T 7424.2-2008 《Optical fibre cable generic specification-Part 2: Basic optical cable test procedures》
- 2.GB/T 7424.1-2003 《Generic specification for optical fibre cables-Part 1:General》
- 3.IEC 61300-2-17:2010 《Fibre optic interconnecting devices and passive components-Basic test and measurement procedures - Part 2-17: Tests-Cold》
- 4.IEC 61300-2-18:2005 《Fibre optic interconnecting devices and passive components-Basic test and measurement procedures - Part 2-18: Tests-Dry heat-High temperature endurance》
- 5.IEC 61300-2-19:2012 《Fibre optic interconnecting devices and passive components-Basic test and measurement procedures-Part 2-19: Tests-Damp heat (steady state)》
- 6.IEC 61300-2-21:2009 《Fibre optic interconnecting devices and passive components-Basic test and measurement procedures-Part 2-21: Tests-Composite temperature/humidity cyclic test》
- 7.IEC 61300-2-22:2007 《Fibre optic interconnecting devices and passive components-Basic test and measurement procedures-Part 2-22: Tests-Change of temperature》
- 8.IEC 61300-3-6:2008 《Fibre optic interconnecting devices and passive components-Basic test and measurement procedures-Part 3-6: Examinations and measurements-Return loss》
- 9.IEC 61300-3-34:2009 《Fibre optic interconnecting devices and passive components-Basic test and measurement procedures-Part 3-34: Examinations and measurements-Attenuation of random mated connectors》
- 10.IEC 61300-3-45:2011 《Fibre optic interconnecting devices and passive components-Basic test and measurement procedures-Part 3-45: Examinations and measurements-Attenuation of random mated multi-fibre connectors》

APPLICABLE CABLE



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| Product Name | Characteristics |          | Product Coding |         |   |
|--------------|-----------------|----------|----------------|---------|---|
| Design       |                 | Material |                | Date    |   |
| Review       |                 | Unit     | mm             | Edition | A |
| Approval     |                 | Scale    |                | Visual  |   |

**End Face Requirement(Single-Mode)**

| Region                       | Scratch  | Speckle   | Other                 |
|------------------------------|--|---|-----------------------|
| Region A<br>(0-25 $\mu$ m)   | None   | None  | None                  |
| Region B<br>(25-115 $\mu$ m) | No black scratches allowed,<br>Allow two white scratches and the width $\leq$ 2 $\mu$ m. | Allow three speckle and the diameters $\leq$ 5 $\mu$ m. | No breakage and crack |

**End Face Requirement(Multi-Mode)**

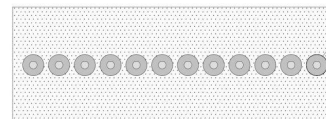
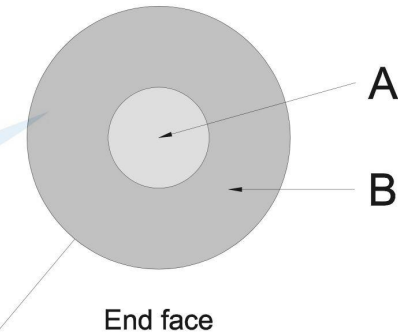
| Region                       | Scratch  | Speckle   | Other                 |
|------------------------------|--|---|-----------------------|
| Region A<br>(0-65 $\mu$ m)   | None   | None  | None                  |
| Region B<br>(65-115 $\mu$ m) | No black scratches allowed,<br>Allow two white scratches and the width $\leq$ 2 $\mu$ m. | Allow three speckle and the diameters $\leq$ 5 $\mu$ m. | No breakage and crack |

1. Inspection equipment requirements: Optical fiber end face detector more than 400 times.
2. For scratches (linear), it refers to the width; for speckles, fragments and particles (non linear), it refers to the maximum diameter; there shall be no cracks in the optical fiber area.
3. There shall be no massive piece stains, fragments, grinding residues, etc outside the contact area.
4. The removable dirt and loose particles on the end face of the insert core must be removed as far as possible. All the allowed defect connectors shall not exceed 15% of the total number.

**Geometric Dimensions Requirement**

| Items                                    |         | Max  | Min    |
|--|---------|------|--------|
| Radius of curvature (mm)                 | X       | 2000 | -10000 |
|  | Y       | -    | 5      |
| Angle (°)                                | X       | 0.15 | -0.15  |
|  | Y (APC) | 8.2  | 7.8    |
|  | Y (PC)  | 0.2  | -0.2   |
| Radius of curvature of optical core (mm) |         | -    | 1      |
| Fiber height (nm)                        |         | 3500 | 1000   |
| Height difference of adjacent fiber (nm) |         | 500  | N/A    |
| Maximum negative coplanar (nm)           |         | 300  | N/A    |

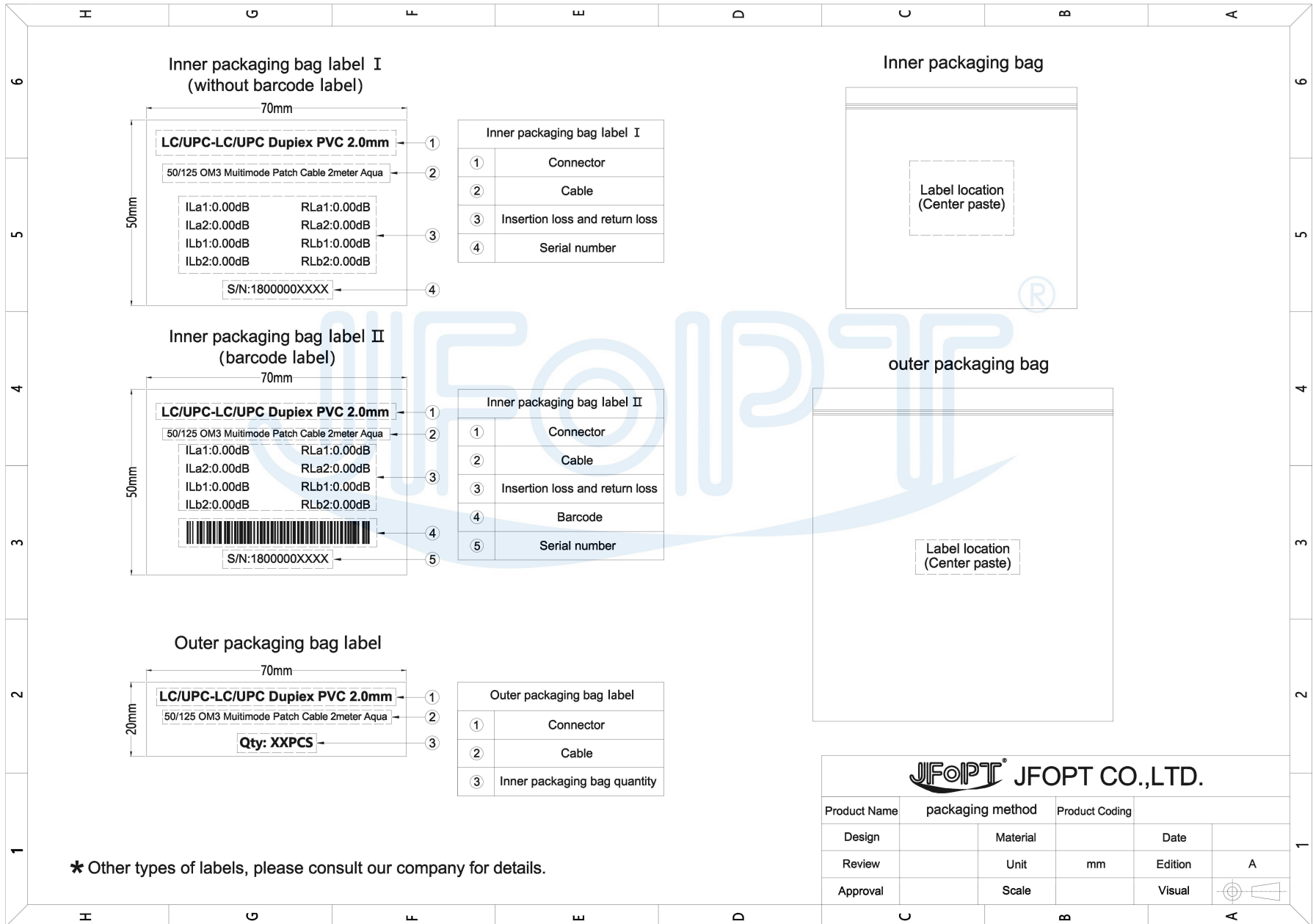
\* This item is optional.  
Please consult our company for details.

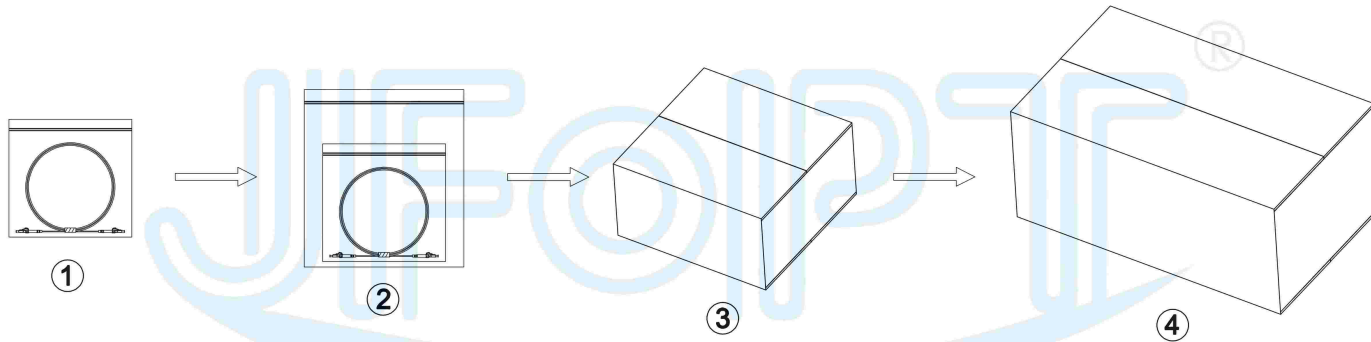


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|              |          |                |        |         |
|--------------|----------|----------------|--------|---------|
| Product Name | end face | Product Coding |        |         |
| Design       |          | Material       | Date   |         |
| Review       |          | Unit           | mm     | Edition |
| Approval     |          | Scale          | Visual | A       |







**Packaging**

- 1. Optical fiber jumper packed in Inner packaging bag.
- 2. Multiple Inner packaging bags packed in outer packaging bag.
- 3. Multiple outer packaging bags packed in inner carton.
- 4. Multiple inner cartons packed in outer carton.

\* Different types of patch cord, the packaging will be different.  
Please consult our company for details.

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|              |                  |                |    |         |
|--------------|------------------|----------------|----|---------|
| Product Name | packaging method | Product Coding |    |         |
| Design       |                  | Material       |    | Date    |
| Review       |                  | Unit           | mm | Edition |
| Approval     |                  | Scale          |    | Visual  |

