

## MPO to 4x LC Duplex Breakout Cable for BlueOptics® QSFP



### Description

The BlueOptics® SFP5141XUXMK MPO Breakout Cable is a high density, high performance, cost effective cable solution to connect BlueOptics® QSFP Modules with 4x SFP+ Modules.

All BlueOptics® MPO Breakout Cable come with high return loss and low insertion loss.

BlueOptics® high density MPO Breakout Cables can combine up to 144 Cores in only one Cable.

BlueOptics® MPO Cables are available in many different variants to fit your needs:

- Multi Mode or Single Mode
- Up to 144x Cores in one Cable
- MPO or MTP Connector
- LC, SC and ST Connector
- Breakout
- Trunk

### Features

- ✓ 1x MPO Connector with 8 Cores
- ✓ 4x LC Duplex Connector
- ✓ For QSFP Usage
- ✓ PC or APC Polish
- ✓ High Quality Ceramic Zirconia Ferrule
- ✓ Brand-name Fiber
- ✓ Aqua (OM3) / Magenta (OM4) / Yellow (SM)
- ✓ Insertion Loss:  $\leq 0.4\text{dB}$
- ✓ Nissin Kasei MPO Components
- ✓ Highest Connector Quality: Up 1500 mating cycles
- ✓ Interferometer tested
- ✓ Single Packed
- ✓ Test Report

### Applications

- ✓ Data Center
- ✓ Modular Networks
- ✓ Fiber Networks

## Warnings

**Laser Safety:** Even small radiation emitted by laser devices can be dangerous to human eyes and lead to permanent eye injuries. Be sure to avoid eye contact with direct or indirect radiation.

## Warranty

Every BlueOptics® MPO Breakout Cable comes with a 25 year replacement warranty and lifetime support. For a warranty inquiry, please contact your CBO sales representative.

This warranty only covers the first user of the equipment.

## Important Notice

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by CBO before they become applicable to any particular order or contract. In accordance with the CBO policy of continuous improvement specifications may change without notice.

The publication of information in this data sheet does not imply freedom from patent or other protective rights of CBO or others.

Further details are available from any CBO sales representative.

## Installation

Remove the dust caps of the MPO Connector.

Remove the dust caps of the LC Connectors.

Put the LC connector of your cable into the LC socket of BlueOptics® SFP+ Module until you hear a “click” sound.

Connect the MPO Connector to BlueOptics® QSFP Module.

You can now use your connection.

### If you got problems with the connection:

- Please make sure the connector is clean. If not, use a tissue and anhydrous alcohol to clean it accurately.

## Order Information

Part No.	Polish	Color	Fiber	Length
SFP5141EU1MK	PC	Aqua	OM3	1 Meter
SFP5141EU3MK	PC	Aqua	OM3	3 Meter
SFP5141EU5MK	PC	Aqua	OM3	5 Meter
SFP5141EU10MK	PC	Aqua	OM3	10 Meter
SFP5141EU15MK	PC	Aqua	OM3	15 Meter
SFP5141EU20MK	PC	Aqua	OM3	20 Meter
SFP5141FU1MK	PC	Magenta	OM4	1 Meter
SFP5141FU3MK	PC	Magenta	OM4	3 Meter
SFP5141FU5MK	PC	Magenta	OM4	5 Meter
SFP5141FU10MK	PC	Magenta	OM4	10 Meter
SFP5141FU15MK	PC	Magenta	OM4	15 Meter
SFP5141FU20MK	PC	Magenta	OM4	20 Meter
SFP5141BU1MK	PC	Yellow	G652D	1 Meter
SFP5141BU3MK	PC	Yellow	G652D	3 Meter
SFP5141BU5MK	PC	Yellow	G652D	5 Meter
SFP5141BU10MK	PC	Yellow	G652D	10 Meter
SFP5141BU15MK	PC	Yellow	G652D	15 Meter
SFP5141BU20MK	PC	Yellow	G652D	20 Meter
SFP5141BU1MA	APC	Yellow	G652D	1 Meter
SFP5141BU3MA	APC	Yellow	G652D	3 Meter
SFP5141BU5MA	APC	Yellow	G652D	5 Meter
SFP5141BU10MA	APC	Yellow	G652D	10 Meter
SFP5141BU15MA	APC	Yellow	G652D	15 Meter
SFP5141BU20MA	APC	Yellow	G652D	20 Meter

## Regulatory Compliance

Feature	Standard	Co.
Smoke Density Purpose	IEC-61034	✓
Halogen Acid Content	IEC-754-1	✓
Flame Resistance	IEC 60332-1, IEC 60332-3	✓
Component Recognition	IEC/EN 60950, UL	✓
RoHS	2002/95/EC	✓
WEEE	2002/96/EG	✓

### 1. LC/UPC Geometrical Parameter

Parameter	Standard	
	Minimum	Maximum
Radius(mm)	7	25
Apex offset (um)	0	50
Fiber Height(nm)	-0.02*R3 +1.3R2 -31R+325	100

### 2. LC/UPC Mechanical Specifications

Parameter	Standard
Maximum Tensile Load (N)	200
Minimum Bend Radius(mm)	30
	Storage
	Installation
	Operating

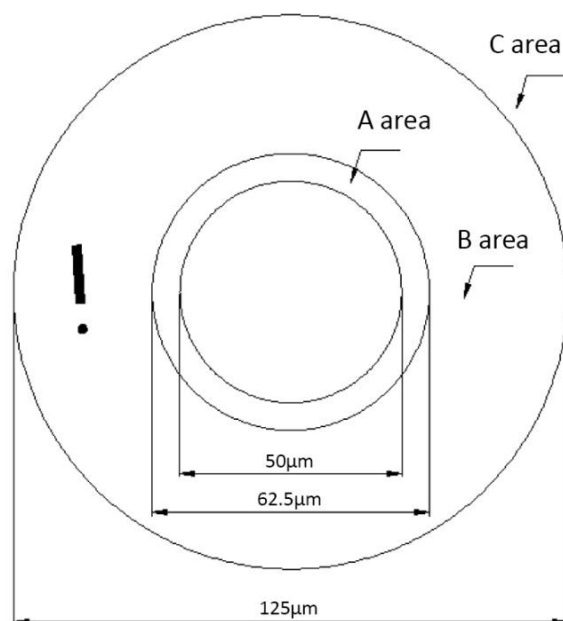
### 3. MPO/PC Geometrical Parameter

Parameter	Standard	
	Minimum	Maximum
Insertion Loss (dB)	0.4	0.7
Apex offset (um)	0	50
Fiber Height(nm)	-0.02*R3 +1.3R2 -31R+325	100

### 4. Reliability Performance

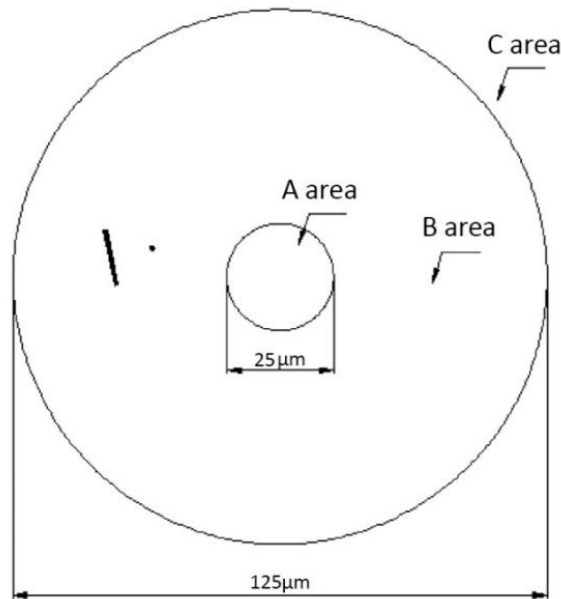
Item	Content	Standard Clause	Conclusion
1	New Device Performance	GR-326-Core 4.4.1	OK
2	High Temperature Aging	GR-326-Core 4.4.2.1	OK
3	Temperature Cycle	GR-326-Core 4.4.2.2	OK
4	Damp-heat Aging	GR-326-Core 4.4.2.3	OK
5	Damp & Hot/ Condensation Cycle	GR-326-Core 4.4.2.4	OK
6	Draying (Not test Item)	GR-326-Core 4.4.2.5	N/A
7	Temperature Cycle after Condensation	GR-326-Core 4.4.2.6	OK
8	Vibration	GR-326-Core 4.4.3.1	OK
9	Buckling	GR-326-Core 4.4.3.2	OK
10	Twist	GR-326-Core 4.4.3.3	OK
11	Tensile	GR-326-Core 4.4.3.4	OK
12	Transmission Performance with Loading	GR-326-Core 4.4.3.5	OK
13	Impact	GR-326-Core 4.4.3.7	OK
14	Durability	GR-326-Core 4.4.3.8	OK
15	Device test after environmental and mechanical test	GR-326-Core 4.4.3.9	OK
16	Salt Spray	GR-326-Core 4.4.4.4	OK
17	85°C water soak	GR-326-Core 4.4.4.5	OK

5. Quality assurance – Multi Mode



Area A (0~50µm):	Area B (50~125µm):	Area C (125~250µm):
<ul style="list-style-type: none"> <li>- No any scratch, chips / black dot</li> <li>- No cleanable dust</li> </ul>	<ul style="list-style-type: none"> <li>- White slight scratch width <math>\leq 2\mu\text{m}</math>, no limit of length, Acceptable Quantity <math>\leq 3</math></li> <li>- No black scratches</li> <li>- Chips /black dot diameter <math>\leq 2\mu\text{m}</math>, Acceptable Quantity <math>\leq 3</math></li> <li>- No cleanable dust</li> </ul>	<ul style="list-style-type: none"> <li>- White slight scratch width <math>\leq 2\mu\text{m}</math>, no limit of length, Acceptable Quantity <math>\leq 5</math></li> <li>- No black scratch</li> <li>- Chips /black dot diameter <math>\leq 5\mu\text{m}</math>, Acceptable Quantity <math>\leq 5</math></li> <li>- No cleanable dust</li> <li>- No flaw for ceramic ferrule</li> </ul>

6. Quality assurance – Single Mode



Area A (0~25µm):	Area B (25~125µm):	Area C (125~250µm):
<ul style="list-style-type: none"> <li>- No any scratch, chips / black dot</li> <li>- No cleanable dust</li> </ul>	<ul style="list-style-type: none"> <li>- White slight scratch width = 1µm, no limit of length, Acceptable Quantity=2</li> <li>- No black scratches</li> <li>- Chips /black dot diameter ≤2µm, Acceptable Quantity≤2</li> <li>- No cleanable dust</li> </ul>	<ul style="list-style-type: none"> <li>- White slight scratch width ≤2µm, no limit of length, Acceptable Quantity≤3</li> <li>- No black scratch</li> <li>- Chips /black dot diameter ≤5µm, Acceptable Quantity≤3</li> <li>- No cleanable dust</li> <li>- No flaw for ceramic ferrule</li> </ul>