

**Note:**

1.RoHS 2011/65/EU and amendment directives (EU) 2015/863 compliant;  
REACH 1907/2006/EC compliant.

**2.Text:**

Test Grade Designation:Each to Reference		
Grade IL/RL	IEC61753 Grade B	
Insertion Loss (IL)	97%≤0.25dB mean≤0.12dB	IEC 61300-3-4
Return Loss (RL)	≥30dB	IEC 61300-3-6
Test Wavelength	850nm Multi-Mode	
End face inspection	×400	

3. Operating Temperature: -40° C ~ +85° C

4. Storage Temperature: -20° C ~ +70° C

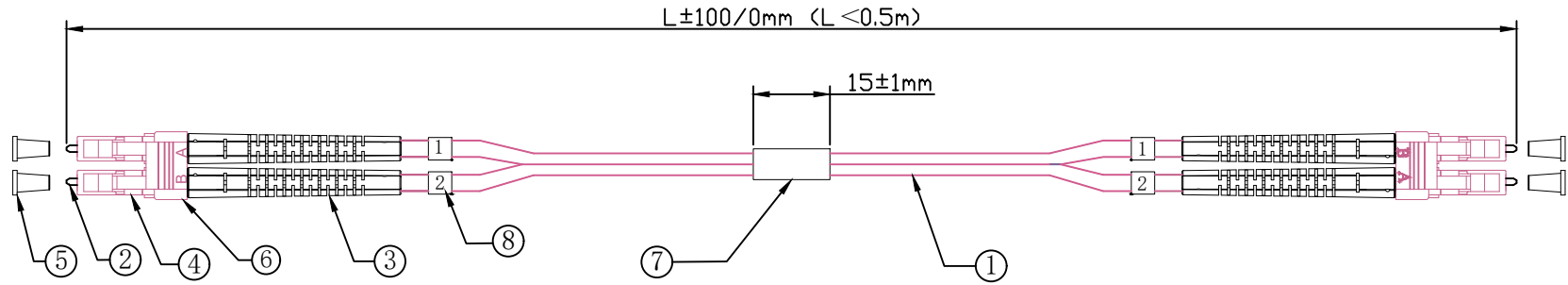
5. Min. bending radius : 10\*D (Static) 20\*D (Dynamic)

D:diameter of cable

**MATERIAL LIST:**

⑧	Ring 1 2	4pcs	
⑦	Black Heat Shrink Tube	2pcs	
⑥	LC Clip Erika violet RAL4003	2pcs	
⑤	LC Dust Cap White	4pcs	
④	LC Duplex Connector Erika violet RAL4003	4pcs	
③	Flex-Angle boot ID: 2.0mm	4pcs	
②	LC/UPC MM Ferrule 126-128um	4pcs	
①	Fiber Optical Cable Duplex Ø2.0mm OM4 50/125um Erika violet RAL4003 LSZH	L+0.1m	
NO.	SPECIFICATION STANDARD	QT'Y	REMARK

SYNERGY 21										
					CUSTOMER				ITEM NO.	see the chart
					PRODUCT NAME	LC/UPC-LC/UPC DX OM4 2.0mm, Flex-Angle boot	Manufacture country	CHINA	UNIT	mm
NEW					2024-08-16	AO	DRAWNBY	CHECKBY	APPOBY	DATE
BY	CHK	REVISION RECORD MODIFICATIONS			DATE	REV.	SYNERGY 21	SYNERGY 21	SYNERGY 21	2024-08-16



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**2. Text:**

Test Grade Designation: Each to Reference		
Grade IL/RL	IEC61753 Grade B	
Insertion Loss (IL)	97% ≤ 0.25dB mean ≤ 0.12dB	IEC 61300-3-4
Return Loss (RL)	≥ 30dB	IEC 61300-3-6
Test Wavelength	850nm Multi-Mode	
End face inspection	× 400	

**MATERIAL LIST:**

⑧	Ring 1 2	4pcs	
⑦	Black Heat Shrink Tube	1pc	
⑥	LC Clip Erika violet RAL4003	2pcs	
⑤	LC Dust Cap White	4pcs	
④	LC Duplex Connector Erika violet RAL4003	4pcs	
③	Flex-Angle boot ID: 2.0mm	4pcs	
②	LC/UPC MM Ferrule 126-128um	4pcs	
①	Fiber Optical Cable Duplex Ø2.0mm OM4 50/125um Erika violet RAL4003 LSZH	L+0.1m	
NO.	SPECIFICATION STANDARD	QT'Y	REMARK

3. Operating Temperature: -40° C ~ +85° C

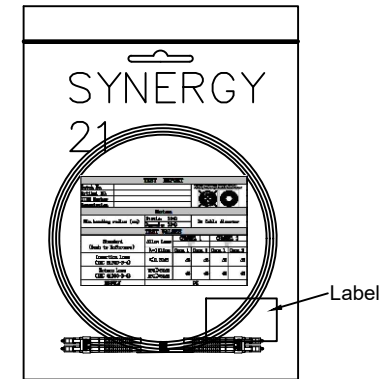
4. Storage Temperature: -20° C ~ +70° C

5. Min. bending radius : 10\*D (Static) 20\*D (Dynamic)

D: diameter of cable

					SYNERGY 21					
					CUSTOMER			ITEM NO.	see the chart	
					PRODUCT NAME	LC/UPC-LC/UPC DX OM4 2.0mm, Flex-Angle boot	Manufacture country	CHINA	UNIT	mm
		NEW			2024-08-16	AO	DRAWNBY	CHECKBY	APPOBY	DATE
BY	CHK	REVISION RECORD MODIFICATIONS			DATE	REV.	SYNERGY 21	SYNERGY 21	SYNERGY 21	2024-08-16

PACKING DRAW



PACKING:SYNERGY 21 PE BAG+LABEL

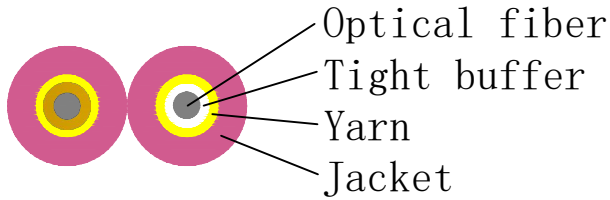
Chart:

NO.	ITEM NO.	LENGTH	COLOR	EAN Nummer	PACKING
1	S217019	0.25m	Erika violet	4038816135919	SYNERGY 21 BAG A
2	S217020	0.5m	Erika violet	4038816113559	SYNERGY 21 BAG A
3	S217021	1m	Erika violet	4038816207227	SYNERGY 21 BAG A
4	S217022	1.5m	Erika violet	4038816113580	SYNERGY 21 BAG A
5	S217023	2m	Erika violet	4038816113757	SYNERGY 21 BAG A
6	S217024	3m	Erika violet	4038816113795	SYNERGY 21 BAG A
7	S217025	5m	Erika violet	4038816113818	SYNERGY 21 BAG B
8	S217026	7.5m	Erika violet	4038816113825	SYNERGY 21 BAG B
9	S217027	10m	Erika violet	4038816113832	SYNERGY 21 BAG B
10	S217028	15m	Erika violet	4038816113887	SYNERGY 21 BAG C
11	S217029	20m	Erika violet	4038816113900	SYNERGY 21 BAG C

SYNERGY 21					
TEST REPORT					
Batch No.		Attention: Please clean the fiber surfaces! Achtung: Bitte reinigen Sie die Stöckstrahlfläche!			
Artikel NO.					
ITEM Number					
Description					
Notes					
Min. bending radius (mm)	Static: 10*D Dynamic: 20*D	D: Cable diameter			
TEST VALUES					
Standard (Each to Reference)	Allow Loss $\lambda = 1550 \text{ nm}$	CHANNEL 1		CHANNEL 2	
		LC		LC	
Insertion Loss (IEC 61300-3-4)	$\leq 0.30 \text{ dB}$	Conn. 1	Conn. 2	Conn. 1	Conn. 2
Return Loss (IEC 61300-3-6)	$\geq 15 \text{ dB}$	dB	dB	dB	dB
<b>RESULT</b>		<b>OK</b>			

SYNERGY 21										
						CUSTOMER		ITEM NO.	see the chart	
						PRODUCT NAME	LC/UPC-LC/UPC DX OM4 2.0mm, Flex-Angle boot	Manufacture country	CHINA	UNIT mm
						DRAWNBY	CHECKBY	APPOBY	DATE	
BY	CHK	REVISION RECORD MODIFICATIONS			DATE	REV	SYNERGY 21	SYNERGY 21	SYNERGY 21	2024-08-16

# Cable cross-section



## OM4 Characteristic of Optical Fiber

Item	Unit	Specification	
		BI-OM4	
Core diameter	μm	50±2.5	
Cladding diameter	μm	124.8± 0.7	
Cladding non-circularity	%	≤1.0	
Core/Clad concentricity error	μm	≤1.5	
Coating diameter	μm	245 ± 10	
Coating/cladding concentricity error	μm	≤12	
OFL Bandwidth	850nm	MHz·km	≥ 3500
	1300nm	MHz·km	≥ 500
EMB Bandwidth	850nm	MHz·km	≥ 4700
Attenuation Coefficient	850nm	dB/km	≤ 2.4
	1300nm	dB/km	≤ 0.6
Macro-bend loss (100turn,75mm radius)	850nm	dB	≤0.5
	1300nm	dB	≤0.5
Proof stress level		kpsi	100
Effective group index of refraction	850nm	/	1.483
	1300nm	/	1.478
Zero dispersion wavelength λ <sub>0</sub>		nm	1295 ≤ λ <sub>0</sub> ≤1340

Other parameters meet standard IEC 60793-2-10

## Cable structure and parameter

Item	Contents	Unit	Value	
Tight buffer fiber	Diameter	mm	0.9±0.05	
	Material	/	LSZH	
Filler	Material	/	Yarn	
	Diameter	mm	2.0(±0.1)×4.1(±0.2)	3.0(±0.1)×6.1(±0.2)
Outer jacket	Material	/	LSZH	
	Color	/	SM: Yellow OM1/OM2: Orange OM3:Aqua OM4:Violet	
Tensile performance	Short term	N	Cable OD:1.2(±0.1)mm; 1.6(±0.1)mm	30
			Cable OD:3.0(±0.1)*6.0(±0.2)mm; 2.0(±0.1)*4.0(±0.2)mm	40
	Long term	N	Cable OD:1.2(±0.1)mm	20
			Cable OD:1.6(±0.1)mm Cable OD:3.0(±0.1)*6.0(±0.2)mm; 2.0(±0.1)*4.0(±0.2)mm	40
Crush	Short term	N/100mm	Cable OD:1.2(±0.1)mm	200
			Cable OD:1.6(±0.1)mm;3.0(±0.1)*6.0(±0.2)mm; 2.0(±0.1)*4.0(±0.2)mm	500
Crush	Long term	N/100mm	Cable OD:1.2(±0.1)mm;1.6(±0.1)mm	100
			Cable OD:3.0(±0.1)*6.0(±0.2)mm; 2.0(±0.1)*4.0(±0.2)mm	200
Cable attenuation		dB/km	SM: ≅ 0.4 at 1310nm, ≅ 0.3 at 1550nm MM: ≅ 1.0 at 1300nm, ≅ 3.0 at 850nm	
Cable weight (Approx.)		kg/km	7.3	13.5

## SYNERGY 21

						CUSTOMER		ITEM NO.			
						PRODUCT NAME	Fiber optic cable	Manufacture country	CHINA	UNIT	mm
			NEW	2024-08-16	A0	DRAWNBY	CHECKBY	APPOBY		DATE	
BY	CHK		REVISION RECORD MODIFICATIONS	DATE	REV	SYNERGY 21	SYNERGY 21	SYNERGY 21		2024-08-16	