

**Note:**  
 1.RoHS 3.0 & Reach 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)	≥50dB	IEC 61300-3-6
Test Wavelength	1310nm	Single-Mode
End face inspection	×400	

MATERIAL LIST:

⑧	Ring 1 2	4pcs	
⑦	Black Heat Shrink Tube	2pcs	
⑥	LC Clip Blue	2pcs	
⑤	LC Dust Cap White	4pcs	
④	LC Duplex Connector Blue	4pcs	
③	LC Flex-Angle boot ID: 2.0mm	4pcs	
②	LC/UPC SM Ferrule 126-128um	4pcs	
①	Fiber Optical Cable Duplex φ2.0mm OS2(G657.A2) 9/125um Yellow 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: 7.5mm

<b>SYNERGY 21</b>													
		Update test data			2022-4-06	A2	CUSTOMER		ITEM NO.				
		change "ROSH 2.0" to "ROSH 3.0"			2022-02-25	A1	PRODUCT NAME		LC/UPC-LC/UPC DX OS2 2.0mm, Flex-Angle boot	Manufacture country	CHINA	UNIT	MM
		NEW			2021-09-08	A0	DRAWNBY		CHECKBY		APPOBY		DATE
BY	CHK	REVISION RECORD MODIFICATIONS			DATE	REV.	SYNERGY 21		SYNERGY 21		SYNERGY 21		2021-09-08

TEST REPORT					
Batch No.			Attention: Please clean the fiber surfaces! Achtung: Bitte reinigen Sie Steckströmfächer!		
Artikel NO.					
ITEM Number					
Description					
Notes					
Min. bending radius (mm)	Static: 10*D		D: Cable diameter		
	Dynamic: 20*D				
TEST VALUES					
Standard (Each to Reference)	Allow Loss $\lambda=1310\text{nm}$	CHANNEL 1		CHANNEL 2	
		Conn. 1	Conn. 2	Conn. 1	Conn. 2
Insertion Loss (IEC 61300-3-4)	$\leq 0.30\text{dB}$	dB	dB	dB	dB
Return Loss (IEC 61300-3-6)	UPC $\geq 50\text{dB}$ APC $\geq 60\text{dB}$	dB	dB	dB	dB
<b>RESULT</b>		<b>OK</b>			

PACKING DRAW

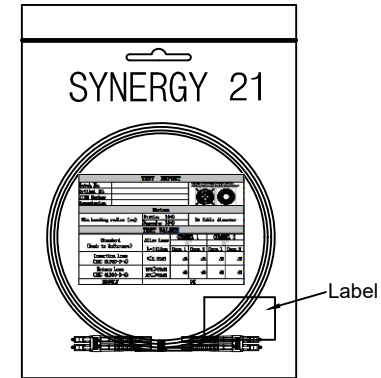
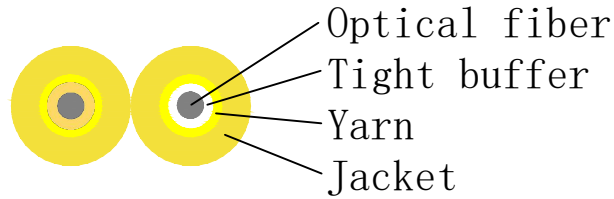


Chart:

Item No.	Package	EAN Code	LENGTH (MM)
S217040	SinglePack: 1pc/SYNERGY 21 A bag/test report+label; SubPack: no; Carton +labelx2;	4038816114112	500
S217041	SinglePack: 1pc/SYNERGY 21 A bag/test report+label; SubPack: no; Carton +labelx2;	4038816114204	1000
S217042	SinglePack: 1pc/SYNERGY 21 A bag/test report+label; SubPack: no; Carton +labelx2;	4038816114228	1500
S217043	SinglePack: 1pc/SYNERGY 21 A bag/test report+label; SubPack: no; Carton +labelx2;	4038816114235	2000
S217044	SinglePack: 1pc/SYNERGY 21 A bag/test report+label; SubPack: no; Carton +labelx2;	4038816114303	3000
S217045	SinglePack: 1pc/SYNERGY 21 B bag/test report+label; SubPack: no; Carton +labelx2;	4038816114310	5000
S217046	SinglePack: 1pc/SYNERGY 21 B bag/test report+label; SubPack: no; Carton +labelx2;	4038816114327	7500
S217047	SinglePack: 1pc/SYNERGY 21 A bag/test report+label; SubPack: no; Carton +labelx2;	4038816114358	10000
S217048	SinglePack: 1pc/SYNERGY 21 C bag/test report+label; SubPack: no; Carton +labelx2;	4038816207258	15000
S217049	SinglePack: 1pc/SYNERGY 21 C bag/test report+label; SubPack: no; Carton +labelx2;	4038816114402	20000

SYNERGY 21									
					CUSTOMER		ITEM NO.	see the chart	
					PRODUCT NAME	LC/UPC-LC/UPC DX OS2 2.0mm, Flex-Angle boot	Manufacture country	CHINA	UNIT MM
		NEW	2021-11-08	A	DRAWNBY	CHECKBY	APPOBY	DATE	
BY	CHK	REVISION RECORD MODIFICATIONS	DATE	REV	SYNERGY 21	SYNERGY 21	SYNERGY 21	2021-11-08	

### Cable cross-section



#### G657A2 Characteristic of Optical Fiber

Item	Unit	Specification		
		G. 657A2		
Mode field diameter	1310nm	$\mu\text{m}$	$8.6 \pm 0.4$	
	1550nm	$\mu\text{m}$	$9.6 \pm 0.5$	
Cladding diameter		$\mu\text{m}$	124.3~125.0	
Cladding non-circularity		%	$\leq 1.0$	
Core concentricity error		$\mu\text{m}$	$\leq 0.5$	
Coating diameter		$\mu\text{m}$	$245 \pm 5$	
Coating/cladding concentricity error		$\mu\text{m}$	$\leq 10$	
Cable cut-off wavelength		nm	$\leq 1260$	
Attenuation Coefficient	1310nm	dB/km	$\leq 0.35$	
	1550nm	dB/km	$\leq 0.21$	
Macro-bend loss (1 turn, 7.5mm radius)	1550nm	dB	$\leq 0.5$	
	1625nm	dB	$\leq 1.0$	
Proof stress level		kpsi	100	
PMD	Maximum Individual Fiber		$\text{ps}/\sqrt{\text{km}}$	0.2
	Link Design Value (M=20, Q=0.01%)		$\text{ps}/\sqrt{\text{km}}$	0.1
	Typical Value		$\text{ps}/\sqrt{\text{km}}$	0.04
Effective group index of refraction	1310nm	$i$	1.4672	
	1550nm	$i$	1.4683	
Zero dispersion wavelength		nm	1300~1322	
Zero dispersion slope		$\text{ps}/(\text{nm}^2 \cdot \text{km})$	$\leq 0.091$	
Zero dispersion slope typical value		$\text{ps}/(\text{nm}^2 \cdot \text{km})$	0.086	

Other parameters meet standard ITU-T G.657

#### 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	
	Short term	N	Cable OD:1.2(±0.1)mm; 1.6(±0.1)mm	30
Tensile performance	Long term	N	Cable OD:3.0(±0.1)*6.0(±0.2)mm; 2.0(±0.1)*4.0(±0.2)mm	40
			Cable OD:1.2(±0.1)mm	20
	Short term	N/100mm	Cable OD: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
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
	Long term	N/100mm	Cable OD:1.2(±0.1)mm;1.6(±0.1)mm	100
Cable attenuation	dB/km		SM: $\leq 0.4$ at 1310nm, $\leq 0.3$ at 1550nm	
			MM: $\leq 1.0$ at 1300nm, $\leq 3.0$ at 850nm	
Cable weight (Approx.)	kg/km		7.3	13.5

### SYNERGY 21

					CUSTOMER		ITEM NO.	see the chart		
					PRODUCT NAME	Fiber optic cable	Manufacture country	CHINA	UNIT	MM
		NEW	2021-11-08	A	DRAWNBY	CHECKBY	APPOBY	DATE		
BY	CHK	REVISION RECORD MODIFICATIONS	DATE	REV	SYNERGY 21	SYNERGY 21	SYNERGY 21	2021-11-08		