tBG2 - FO Premium splice module 6x E2000 Compact MM 3U/7HP with pigtails 50/125µ OM4

tBG II - tde Subrack

The newest generation of tde - Subracks is developed especially for the application by loose tube cables with high fiber counts. Up to 288 fibers can be distributed to 12 splice modules. Alternative up to 12 tML® modules. By the application deep-adjustable 84HP Subrack with 7HP-grid is a simple module mounting possible. The modules are fixed by screws. Cable over lengths are accommodated certainly in a cable tray. The cable tray is removable. The cable entry is on the left and right back side. On the front side is a patch cord management panel with 5 rings integrated.

tBG II - tde subrack 19“/4U is for the equip of up to 12 x tBG II - splice modules 3U/7HP with high component density.

The tBG II – FO splice module 3U/7HP is intended for the installation in tBG II - subracks (for 12 x modules).

Features:

- Available for all standard FO connectors: E2000, FC/PC, LC, SC and ST

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- Integrated loose tube strain relief
- Module mounting with screws

Technical Data

Pre-mounted	6 E2000 compact adapters 12 E2000 Fiber pigtails 50/125µ OM4 12 Crimp Splice protectors 1 Splice cassettes 1 Splice holder 1 Splice cover
Alternative pre-mounted	TBG2-M06-xxE2C50-4PS
xx	(01 - 06) quantity of adapters

Type	Front panel for 6 x E2000 Compact
Color	Anodized E6 EV1
Inscription	1 - 12 Screen printing by label strips
Mateial	Alu- AlMG3 G22
Dimensions	3U/7HP

Type	Module slot for rack 3U/84HP
Dimensions	app. 250 x 100 mm

FO Adapters

Standardisation	acc. to IEC61754-15, DIN EN 186270
Mating cycles	min. 1000
Pull-out force	min. 70 N
Number of connectors (A)	1
Connector type (A)	E2000™ Compact
Protection class (IP) connector (A)	20
Polishing connector (A)	PC
Attenuation grade IL - connector (A)	≤ 0.2 dB, testing method acc. to IEC 61300-3-4
Connector color (A)	beige
Lever- frame-coding connector (A)	color
Frame color connector (A)	magenta-magenta
Sleeve material	Zirkonia Staight Split
Adapter fastening method	flange snap
Holder for connector / module	Snap-In frame
Fiber type	Multimode (MM)
Dimensions	74.7 / 42 x 14.7 x 13 / 15.4 mm
Material	steel: X10CrNi18-8 (1.4310) / plastic: PBT, fiber-glass reinforced (halogen-free)
Manufacturer	R&M

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FO Pigtails Premium

FO Connectors

Type	E2000
Ferrule	Ceramic
Ferrule Hole	126 µ
Connector colour	Black
Lever colour	Magenta
Boot colour	Black
Manufacturer	RDM

Optical performance

Fiber	Type	Wavelength	Insertion loss typ.	Insertion loss max.	Return loss min.
50/125µ OM4	E2000	850 nm	≤ 0.10 dB	0.30 dB	35 dB

FO Cables

Tight Buffer	Low smoke (IEC 61034 and EN 50268) and free of halogens (LSOH)
	Non corrosive after IEC 60754-2 and EN 50267
	Flame resistent after IEC 60332-3C and EN 50266-2-4
	Completly dry design
	Free from metal, no grounding problems and potential differences
	Tight Buffer for simple and direct connector mounting

Characteristics

Fiber Count	1 (Tight Buffer)
Core-Ø	0.9 mm
Coreweight	1 kg/km
Min. Bending radius - Installation	30 mm
Min. Bending radius - Operation	30 mm
Removal	1500 mm
Fire load	0.15 MJ/m
Temperature range - Installation	-5 to +50°C
Temperature range - Operation	-20 to +60°C
Temperature range - Transport / Lagerung	-25 to +70°C

FO Fiber

Type	Corning ClearCurve® 50/125µ OM4 multimode fiber
Optimized Data Rate over Distance	40/100 Gb over 170 m* 10 Gb/s over 550 m 1 Gb/s over 1100 m

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Standard Compliance	ISO/IEC 11801: type OM4 fiber** IEC 60793-2-10: type A1a.3 fiber** TIA/EIA: 492AAAD ITU: ITU G651.1
*	Distances specified in the 40G/100G per IEEE 802.3ba standard are 150m on OM4 and 100m on OM3; Corning fibers are manufactured to tighter dispersion specifications and thereby support the extended distances shown in the table (assuming cable attenuation ≤3.0 dB/km and same 1.0 dB of connector loss for OM3 that the standard requires for OM4)
**	Assumes IEC draft standard is harmonized with 492AAAD which was approved by TIA

Optical Specifications

Bandwidth	High Performance EMB* (MHz.km): 4700 at 850 nm only Legacy Performance EMB** (MHz.km): 3500 at 850 nm / 500 at 1300 nm
Attenuation	At 850 nm max. ≤ 2.3 dB/km At 1300 nm max. ≤ 0.6 dB/km
Macrobend Loss	Mandrel Radius (mm): 37.2 / 15 / 7.5 Number of Turns: 100 / 2 / 2 Induced Attenuation (dB) at 850 nm: ≤ 0.05 / ≤ 0.1 / 0.2 Induced Attenuation (dB) at 1300 nm: ≤ 0.15 / ≤ 0.3 / ≤ 0.5
Numerical Aperture	0.200 ± 0.015
*	Ensured via miniEMBc, per TIA/EIA 455-220A and IEC 60793-1-49, for high performance laser-based systems (up to 10Gb/s)
**	OFL BW, per TIA/EIA 455-204 and IEC 60793-1-41, for legacy and LED-based systems (typically up to 100 Mb/s)

Dimensional Specifications

Core Diameter	50.0 ± 2.5 µm
Cladding Diameter	125.0 ± 1.0 µm
Core-Clad Concentricity	≤ 1.5 µm
Cladding Non-Circularity	≤ 1.0%
Core Non-Circularity	≤ 5.0%
Coating Diameter	242 ± 5 µm
Coating-Cladding Concentricity	< 12 µm

Environmental

Enviromental Test	Test Condition	Induced Attenuation 850 nm & 1300 nm (dB/km)
Temperature Dependence	-60°C to +85°C	≤ 0.10
Temperature Humidity Cycling	-10°C to +85°C and 4% to 98% RH	≤ 0.10
Water Immersion	23°C ± 2°C	≤ 0.20
Heat Aging	85°C ± 2°C	≤ 0.20
Damp Heat	85°C at 85% RH	≤ 0.20
Operating Temperature Range	-60°C to +85°C	

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Mechanical Specifications

Proof Test	The entire fiber length is subjected to a tensile stress ≥ 100 kpsi (0.7 GN/m²).
Length	Fiber lengths available up to 17.6 km/spool.

Performance Characterizations

Refractive Index Difference	1%
Effective Group Index of Refraction	850 nm: 1.480 1300 nm: 1.479
Fatigue Resistance Parameter (nd)	20
Coating Strip Force	Dry: 0.6 lbs (2.7N) Wet: 14 days in 23°C water soak: 0.6 lbs (2.7N)
Cromatic Dispersion	Zero Dispersion Wavelength (λ_0): 1295 nm $\leq\lambda_0\leq$ 1315 nm Zero Dispersion Slope (S_0): ≤ 0.101 ps/(nm²*km)

Product variants & accessories

Art.-No.	Description
TBG2-M06-06E2AC9APS	tBG2 - FO Premium splice module 6x E2000 Compact APC SM 3U/7HP with pigtails 09/125µ
TBG2-M06-06E2C50-3PS	tBG2 - FO Premium splice module 6x E2000 Compact MM 3U/7HP with pigtails 50/125µ OM3
TBG2-M06-06E2C50-4PS	tBG2 - FO Premium splice module 6x E2000 Compact MM 3U/7HP with pigtails 50/125µ OM4
TBG2-M06-06E2C9PS	tBG2 - FO Premium splice module 6x E2000 Compact SM 3U/7HP with pigtails 09/125µ

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