

tBG2 - FO splice module 6x E2000 Compact APC SM 3U/7HP with pigtails 09/125 μ



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 APC compact adapters 12 E2000 APC Fiber pigtails 9/125 μ OS2 12 Crimp Splice protectors 1 Splice cassettes 1 Splice holder 1 Splice cover
Alternative pre-mounted	TBG2-MO6-xxE2AC9AS
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
Material	Alu- AIMG3 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)	APC 8°
Attenuation grade IL - connector (A)	≤ 0.2 dB, testing method acc. to IEC 61300-3-4
Connector color (A)	green
Lever- frame-coding connector (A)	color
Frame color connector (A)	green-green
Sleeve material	Zirkonia Straight Split
Adapter fastening method	flange snap
Holder for connector / module	Snap-In frame
Fiber type	Singlemode (SM)
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 Standard

FO Connectors

Type	E2000 APC
Ferrule	Ceramic
Ferrule Hole	125.5 μ
Ferrule Concentricity	≤ 0.6 μ
Connector Colour	Green
Lever Colour	Green
Boot Colour	Green
Manufacturer	RDM

Optical performance

Fiber	Type	Wavelength	Insertion loss typ.	Insertion loss max.	Return loss min.
9/125μ	E2000 APC	1550 nm	≤ 0.20 dB	0.45 dB	70 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 resistant after IEC 60332-3C and EN 50266-2-4
	Completely 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 Ultra SMF-28 [®] 09/125μ OS2 singlemode fiber
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Maximum Attenuation	At 1310 nm max. 0.32 dB/km At 1383 nm max. 0.32 dB/km At 1490 nm max. 0.21 dB/km At 1550 nm max. 0.18 dB/km At 1625 nm max. 0.20 dB/km
Attenuation vs. Wavelength	Range: 1285 - 1330 nm; Ref. λ : 1310 nm; Max. Difference: 0.03 dB/km Range: 1525 - 1575 nm; Ref. λ : 1550 nm; Max. Difference: 0.02 dB/km
Macrobend Loss	Mandrel Radius: 10mm; Number of Turns: 1; Wavelength: 1550nm; Induced Attenuation: ≤ 0.50 dB Mandrel Radius: 10mm; Number of Turns: 1; Wavelength: 1625nm; Induced Attenuation: ≤ 1.5 dB Mandrel Radius: 15mm; Number of Turns: 10; Wavelength: 1550nm; Induced Attenuation: ≤ 0.05 dB Mandrel Radius: 15mm; Number of Turns: 10; Wavelength: 1625nm; Induced Attenuation: ≤ 0.30 dB Mandrel Radius: 25mm; Number of Turns: 100; Wavelength: 1310nm, 1550nm, 1625nm; Induced Attenuation: ≤ 0.01 dB
Point Discontinuity	Wavelength: 1310 nm; Point Discontinuity: ≤ 0.05 dB Wavelength: 1550 nm; Point Discontinuity: ≤ 0.05 dB
Cable Cutoff Wavelength (λ_{ccf})	$\lambda_{ccf} \leq 1260$ nm
Mode-Field Diameter	At 1310 nm = 9.2 ± 0.4 μ m At 1550 nm = 10.4 ± 0.5 μ m
Dispersion	At 1550 nm = ≤ 18.0 [ps/(nm*km)] At 1625 nm = ≤ 22.0 [ps/(nm*km)]
	Zero Dispersion Wavelength (λ_0): $1304 \text{ nm} \leq \lambda_0 \leq 1324 \text{ nm}$ Zero Dispersion Slope (S_0): ≤ 0.092 ps/(nm ² *km)
Polarization Mode Dispersion (PMD)	PMD Link Design Value = ≤ 0.04 ps/ $\sqrt{\text{km}}$ Maximum Individual Fiber = ≤ 0.1 ps/ $\sqrt{\text{km}}$

Dimensional Specifications

Fiber Curl	≥ 4.0 m radius of curvature
Cladding Diameter	125.0 ± 0.7 μ m
Core-Clad Concentricity	≤ 0.5 μ m
Cladding Non-Circularity	$\leq 0.7\%$
Coating Diameter	242 ± 5 μ m
Coating-Cladding Concentricity	< 12 μ m

Environmental Specifications

Environmental Test	Test Condition	Induced Attenuation 1310 nm, 1550 nm & 1625 nm
Temperature Dependence	-60°C to +85°C	≤ 0.05
Temperature Humidity Cycling	-10°C to +85°C up to 98% RH	≤ 0.05
Water Immersion	23°C \pm 2°C	≤ 0.05
Heat Aging	85°C \pm 2°C	≤ 0.05
Operating Temperature Range	-60°C to +85°C	

Mechanical Specifications

Proof Test	The entire fiber length is subjected to a tensile stress ≥ 100 kpsi (0.69 GPa).
Length	Fiber lengths available up to 63.0 km/spool.

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Performance Characterizations

Core Diameter	8.2 μ m
Numerical Aperture	0.14
Effective Group Index of Refraction	1310 nm: 1.4676 1550 nm: 1.4682
Fatigue Resistance Parameter (nd)	20
Coating Strip Force	Dry: 0.6 lbs (3N) Wet: 14 days room temperature: 0.6 lbs (3N)
Rayleigh Backscatter Coefficient (for 1 ns Pulse Width)	1310 nm: -77 dB 1550 nm: -82 dB

Product variants & accessories

Art.-No.	Description
TBG2-M06-06E2AC9AS	tBG2 - FO splice module 6x E2000 Compact APC SM 3U/7HP with pigtails 09/125 μ
TBG2-M06-06E2C50-3S	tBG2 - FO splice module 6x E2000 Compact MM 3U/7HP with pigtails 50/125 μ OM3
TBG2-M06-06E2C50-4S	tBG2 - FO splice module 6x E2000 Compact MM 3U/7HP with pigtails 50/125 μ OM4
TBG2-M06-06E2C50S	tBG2 - FO splice module 6x E2000 Compact MM 3U/7HP with pigtails 50/125 μ
TBG2-M06-06E2C62S	tBG2 - FO splice module 6x E2000 Compact MM 3U/7HP with pigtails 62,5/125 μ
TBG2-M06-06E2C9S	tBG2 - FO splice module 6x E2000 Compact SM 3U/7HP with pigtails 9/125 μ