



江苏田信塑料光纤有限公司

Jiangsu TX Plastic Optical Fibers Co.,Ltd

通体发光塑料光纤

产品规格书

Side Glow Optic Fiber

Product specifications

TX-SFL14000-1

2023.01

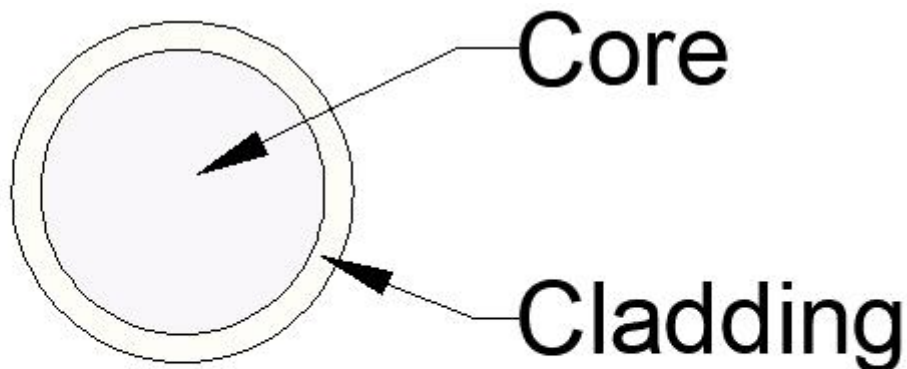
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1. 产品名称(Product name): 通体发光塑料光纤(Side Glow Optic Fiber)
2. 产品型号(Product model): TX-SFL14000-1
3. 产品结构(Product mix):

项目(Item)	技术参数(Technical parameter)	单位(Unit)	
塑料光纤 Plastic optical fiber	纤芯材料 (Core material)	甲基丙烯酸甲酯(MMA)	——
	包层材料 (Cladding material)	氟乙烯-四氟乙烯共聚物(FEP)	——
	纤芯折射率 (Core refractive index)	1.475	——
	包层折射率 (Cladding refractive index)	1.375	——
	纤芯直径 (Core diameter)	13400±150	μm
	包层直径 (Cladding diameter)	14000±300	μm
	纤芯数量 (Number of cores)	1	cores
产品标准 (Product standard)	ROHS,REACH,SGS, (YD/T 1447-2013)	——	

4. 产品结构示意图(Product structure diagram):



TX-SFL14000-1
Structure diagram



5. 产品性能(Product performance):

项目(Item)		试验条件 (Test conditions)	检验结果 (Inspection results)
工作温度(Operation Temperature)		No deterioration of optical properties (In a dry environment)	$-20^{\circ}\text{C} \leq \text{Temperature} \leq 70^{\circ}\text{C}$
光学性能 Optical performance	衰减 (Attenuation)	@650nm	$\leq 320\text{dB/km}$
机械性能 Mechanical properties	拉伸屈服强度 (Tensile yield strength)	Loading rate: 100mm/min Sample length: 100~200mm Duration: reach 4% elongation	Tensile load: $\geq 70\text{N}$
	最小弯曲半径 (Minimum bending radius)	Number of coils per time: 6 Number of cycles: 10 Attenuation change $\leq 2\text{dB}$	Minimum bending radius: 140mm
	冲击附加衰减 (Additional attenuation of impact)	Radius of impact surface: 12.5mm Impact energy: $0.2\text{N} \cdot \text{M}$ Impact times: at least 3 times, and the distance between each impact point shall be at least 500mm	Attenuation change $\leq 2\text{dB}$
	反复弯曲附加衰减 (Repeated bending additional attenuation)	Bending radius: 140mm Number of cycles: 200 Load: 5N	Attenuation change $\leq 2\text{dB}$
	扭转附加衰减 (Torsional additional attenuation)	Number of cycles: 5 Torsional length: 250mm Torsion angle: $\pm 180^{\circ}$ Axial tension: 5N	Attenuation change $\leq 2\text{dB}$

*以上所有的测试，均在温度 25℃、湿度 50%下进行，除非另有说明。

All the above tests are conducted at 25 °C and 50% humidity, unless otherwise specified.