

# SINGLE CORE END-LIT POLYMER FIBRE

## UNSHEATHED

Single strand optical fibre without a sheath.

Core Material: Polymethyl Methacrylate

Cladding Material: Fluorinated polymer

Refractive Index: 1.49

Refractive Index Profile: Step Index

Numerical Aperture: 0.5

Operation Temperature Range: -55°C to +70°C in low humidity; <60°C at 95% RH (attenuation change is within 10% after 1000 hours except for that due to absorbed water). Please note that fibre can become brittle at lower temperatures.

Part No.	Nominal Fibre Diameter	Outer Diameter Tolerance	Reel Length	Approximate weight (excluding packaging)	Minimum Bend Radius	Approximate transmission loss (ideal conditions, 650nm collimated light)
CK10U	0.25 mm	± 0.023 mm	12000m	0.06 g/m	5mm	350 dB/km
CK20U	0.50 mm	± 0.030 mm	6000m	0.4 g/m	10mm	250 dB/km
CK30U	0.75 mm	± 0.045 mm	2700m	0.9 g/m	15mm	200 dB/km
CK40U	1.00 mm	± 0.060 mm	1500m	1.5 g/m	20mm	200 dB/km
CK60U	1.50 mm	± 0.090 mm	700m	3.2 g/m	30mm	200 dB/km
CK80U	2.00 mm	± 0.120 mm	250m	4.0 g/m	40mm	200 dB/km

Minimum order length = 1 Reel, for small quantities – see “Small Packs” below.

## BLACK SHEATHED

The fibre is the same as the unsheathed but a black plastic coating protects the fibre outdoors and in arduous conditions.

Outer sheathing material TP519 is a thermoplastic low-smoke halogen-free flame retardant compound with low toxic fume emission.

TP519 Toxicity Index NES 713:

1.3

TP519 Halogen Acid Gas Evolution BS EN 50267-2-1:

<0.5%

TP519 Smoke Emission 3m cube test BS 7622:

Pass

Part No.	Nominal Fibre Diameter	Nominal Outer Diameter (Sheath)	Outer Diameter Tolerance	Reel Length	Approximate weight (excluding packaging)	Minimum Bend Radius
CK30S	0.75 mm	2.0mm	± 0.3 mm	2700m	3.9 g/m	20mm
CK40S	1.00 mm	2.2mm	± 0.3 mm	1500m	4.9 g/m	25mm
CK60S	1.50 mm	2.6mm	± 0.3 mm	700m	6.6 g/m	40mm
CK80S	2.00 mm	3.1mm	± 0.4 mm	250m	12.8 g/m	60mm

Minimum order length = 1 Reel, for small quantities – see “Small Packs” below.

## SMALL PACKS OF END-LIT FIBRE

Small packs of the above fibres.

UNSHEATHED			BLACK SHEATHED		
Part No.	Nominal Outer Diameter	Pack Size	Part No.	Nominal Outer Diameter	Pack Size
PCK10U	0.25 mm	30m	-	-	-
PCK20U	0.50 mm	30m	-	-	-
PCK30U	0.75 mm	30m	PCK30S	2.0mm	30m
PCK40U	1.00 mm	30m	PCK40S	2.2 mm	30m
PCK60U	1.50 mm	20m	PCK60S	3.0 mm	20m
PCK80U	2.00 mm	15m	PCK80S	3.0 mm	15m

Minimum order length = 1 pack.

# MULTI-STRAND END-LIT POLYMER FIBRE

## BLACK SHEATHED

Multiple strands of fibre in a black plastic coating which holds the bundle together and protects the fibre outdoors and in arduous conditions. The fibre can be terminated with ferrules for use with end fittings or for starry effects, the sheathing can be stripped back and the individual fibres fanned out to give small points of light.

Outer sheathing material TP519 is a thermoplastic low-smoke halogen-free flame retardant compound with low toxic fume emission.

TP519 Toxicity Index NES 713: 1.3  
TP519 Halogen Acid Gas Evolution BS EN 50267-2-1: <0.5%  
TP519 Smoke Emission 3m cube test BS 7622: Pass

Core Material: Polymethyl Methacrylate      Cladding Material: Fluorinated polymer

Refractive Index: 1.49      Refractive Index Profile: Step Index

Numerical Aperture: 0.5

Operation Temperature Range: -55°C to +70°C in low humidity; <60°C at 95% RH (attenuation change is within 10% after 1000 hours except for that due to absorbed water). Please note that fibre can become brittle at lower temperatures.

Part number format: xxxEGyyy where x = the number of strands in the cable, EG = 'End Glow' and y = the diameter of the fibres in µm x 10.

Part No.	Number of strands	Individual strand diameter	Approximate active diameter	Approximate outer diameter	Minimum Bend Radius	Full reel length
4EG075	4	0.75mm	1.9mm	3mm	20mm	500m
7EG075	7	0.75mm	2.3mm	4.5mm	25mm	500m
12EG075	12	0.75mm	3.1mm	4.5mm	25mm	300m
25EG075	25	0.75mm	4.3mm	6.3mm	30mm	300m
33EG075	33	0.75mm	5.0mm	7.1mm	50mm	200m
50EG075	50	0.75mm	6.0mm	8.7mm	60mm	150m
75EG075	75	0.75mm	7.5mm	10.5mm	80mm	100m
88EG075	88	0.75mm	8.0mm	10.5mm	90mm	100m
100EG075 <sup>1</sup>	100	0.75mm	8.4mm	12mm	100mm	100m

Minimum order for cut lengths = 20m, discounts are available for full reels.

<sup>1</sup>100EG75 fibre is to special order and the minimum order is 100m. It requires a ½" ferrule and does not fit into our standard Ezefix M8 and M10 ferrules.

Custom cables are available with different fibres and numbers of strands. These are to order only, please contact us for details and pricing.