

Technical Specification
Nx50/125µ MM OM3 SLT CSA SJ SLIM Outdoor FO Cable
Part Number: E54-xxxT3-xx7
Revision 04/23 Date: 11 October 2023



Color coded OM3 Multi-mode optical fibers buffered in a single gel-filled loose tube. The tube is wrapped with water blocking glass yarn. A corrugated bonded steel tape is applied to ensure the fibers are protected against rodents damage followed by a black PE jacket rendering the cable suitable for outdoor installations in harsh environments.

Basic fibers

Basic optical fibers	OM3 - 50/125 µm Graded index multimode conforming to ISO/IEC 11801 & TIA-568-C.3 OM3		
Core diameter	50 µm nom.		
Clad diameter	125 ± 1.0 µm		
Primary coating diameter	245 ± 10 µm		
Fibers numerical aperture	0.200±0.02		
Fibers attenuation (cabled)	Max. 3.5 dB/km @ 850nm	Max. 1.5 dB/km @ 1300nm	
Fibers bandwidth - OFL	Min. 1500 MHz·km @ 850nm	Min. 500 MHz·km @ 1300nm	
Fibers bandwidth - EMB	Min. 2000 MHz·km @ 850nm	Min. 500 MHz·km @ 1300nm	

Cable Construction

Central strength element	None
Buffer coating	PBT Loose tube filled with Thixotropic gel, natural color
Strength members	Water blocking glass yarn served around the loose tube
Fibers color code up to 12F	Blue, Orange, Green, Brown, Grey, White, Red, Black, Yellow, Violet, Pink, Turquoise
Fibers color code for 24F	Blue, Orange, Green, Brown, Grey, White, Red, Black, Yellow, Violet, Pink, Turquoise, Blue with black tracer, Orange with black tracer, Green with black tracer, Brown with black tracer, Grey with black tracer, White with black tracer, Red with black tracer, Natural, Yellow with black tracer, Violet with black tracer, Rose with black tracer, Turquoise with black tracer
Rip-cords	Two Polyester cords laid in 180° orientation for easy armor & jacket removal. Red, DTX6000
Armor	150 micron corrugated steel tape laid longitudinally, bonded to the outer jacket
Outer jacket	UV resistant PE
Outer jacket thickness	1.2 mm nom., 1.0 mm min.
Outer jacket color	Black, RAL 9005
Surface marking	HCS E54-xxxT3 SLT NN x50/125µm OM3 OUTDOOR FO CABLE CSA SJ CE 2011/65/EU (RoHS-2) [Month, Year] [Batch No.] [Meter Mark] METER

Surface marking - example HCS E54-012T3 SLT 12x50/125µm OM3 OUTDOOR FO CABLE CSA SJ CE 2011/65/EU (RoHS-2) 12/2021 GB1234 0001 METER

Optional Constructions

P/N	Fibers per Tube	Tube ID/OD mm	Cable nom. OD mm	Weight kg/km
E54-004T3	4	1.8/2.6	7.0	61
E54-006T3	6	1.8/2.6	7.0	62
E54-012T3	12	1.8/2.6	7.0	63
E54-024T3	24	2.0/2.8	7.1	68

Performance

Test	Value	Specification	Test method
Tensile strength -Short-term load	1500N (for installation)	0.1dB max. IL increase@1550 nm, no sheath damage	IEC 60794-1-21-E1
Crush resistance	Load: 2200 N /100mm ,Time: 1 minute, Length: 100 mm	No fiber break ,No sheath damage	IEC 60794-1-21-E3
Impact resistance	Impact height: 1m ,Impact weight:450g ,Points of impact: 3 ,Times of per point: 1	No fiber break ,No sheath damage	IEC 60794-1-21-E4
Repeated bending	Bending radius.: 20 × D, Load: 50N ,Flexing rate: 2sec/cycle ,No. of cycle: 25	Loss change after test≤ 0.05dB@1550 nm, No sheath damage	IEC 60794-1-21-E6
Water penetration	Height of water: 1m, Sample length: 3 m ,Time: 24 hr	No drip through the cable core assembly	IEC 60794-1-22-F5
Twist	Length: 1 m, Load: 50N, Twist rate: ≤60sec/cycle, Twist angle: ±90°, No. of cycle: 5	No fiber break, No sheath damage	IEC 60794-1-21-E7
Temperature Cycling	Temperature step: +20oC→-30oC→+70oC→+20oC, Number of cycle: 2 turns, Time per each step: 12 hrs	Loss change after test≤ 0.15dB/km@1550 nm, No sheath damage	IEC 60794-1-22-F1

Physical Properties

Storage temperature range	-40 to +80C
Installation temperature range	-15 to +60C
Operating temperature range	-40 to +80C
Bend radius during installation	20xD min. per IEC 60794-1-2 E11
Bend radius during operation	10xD min. per IEC 60794-1-2 E11

This cable fully conforms to EU Directive 2011/65/EU (RoHS-2)