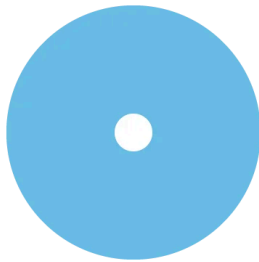


SMC-400Si-3-10EV/28ETV-xxx

SMC-E-400Si-3.3-NA012-3-OPC.EC/APC.EC.TI-0-xxx

Single-mode fiber cable

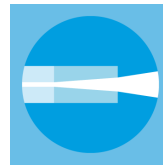


FEATURES

Single-mode fiber cable with Gaussian intensity distribution and low-stress fiber connectors.

- Cut-off wavelength: 400 nm
- Max. wavelength: 680 nm
- Pure Silica core fiber with low attenuation
- Effective fiber NAe^2 : $0.072 (\pm 0.005)$ @ 405 nm
- Cable: 3 mm cable with Kevlar strain-relief
- Connector Type (customer-specified): FC PC (0 deg, end cap), FC APC (8 deg, end cap, amagnetic)

- End cap for reduced power density at the fiber end-face



DESCRIPTION

The main features of the fiber cable type SMC-400Si-3-10EV/28ETV-xxx (also known as SMC-E-400Si-3.3-NA012-3-OPC.EC/APC.EC.TI-0-xxx) include

Fiber

The fiber is a single-mode fiber, defined by its NA and its cut-off wavelength. The [nominal NA](#) is 0.12 and is specified by the fiber manufacturer. Additionally the effective numerical aperture NAe^2 is measured for each fiber batch by Schäfter + Kirchhoff. The fiber has an [effective numerical aperture \$NAe^2\$](#) of 0.072 and a [cut-off wavelength](#) λ_{co} of 400 nm. Maximum wavelength is 680 nm. Besides the nominal cut-off wavelength λ_{co} , Schäfter + Kirchhoff also offers measured data for the cut-off wavelength for each individual fiber cable.

The fiber has a [pure silica](#) core for long-term stable low attenuation and high transmission.

Fiber cable

The [fiber cable](#) has a 3 mm jacket in black with Kevlar strain-relief and a length of xx cm.

Fiber Connectors

The fiber cable is equipped with a [fiber connector](#) of type FC PC (0 deg polish, end cap, wide key) at the one end and a fiber connector of type FC APC (8 deg polish, end cap, amagnetic, narrow key) at the other end. All of the fiber connectors of type FC have an alignment index (key). The wide key (type "N") fiber connector has an alignment index (key) of 2.14 mm width. The narrow key (type "R") fiber connector has an alignment index (key) of 2 mm width. The fiber cable is vacuum compatible down to 10^{-7} mbar.

End Caps

The fiber is equipped with an [end cap connector](#). This means that a short length of fiber ($< 300 \mu m$) without a core is spliced onto the polarization-maintaining fiber. Without a fiber core to confine the beam, the mode field diameter of the beam already starts to diverge within the fiber end cap, significantly reducing the power density at the fiber end-face.

Amagnetic fiber connectors

[Amagnetic fiber connectors](#) are completely made of titanium and have a ceramic ferrule. This ensures that the relative permeability μ_r of the connector is near 1 ($\chi = 5 \cdot 10^{-5}$, $\mu_r = 1.00005$), making it transparent to magnetic fields.

TECHNICAL DATA

SMC-400Si-3-10EV/28ETV-xxx

Order Code	SMC-400Si-3-10EV/28ETV-xxx
Also known as	SMC-E-400Si-3.3-NA012-3-OPC.EC/APC.EC.TI-0-xxx
Fiber type	Single-mode
Cut-off	$< 400 \text{ nm}$
Wavelength max.	680 nm
Pure silica core	yes
Nominal Fiber NA	0.12
Nominal MFD (@400 nm)	$3.3 \pm 0.5 \mu m$

Effective fiber NAe ²	0.072 (@405 nm) ± 0.005	
Core attenuation [dB/km]	30 (@488 nm)	
Cable	Ø 3 mm cable with Kevlar strain-relief	
Cable length	xxx cm	
Min. bend radius	40 mm	
Connector type	FC	FC
Polish	0 deg	8 deg
End cap	yes	yes
amagnetic	no	yes
Key width	wide key	narrow key
Core centered	no	yes
Bend protection	Hytrel	
Vacuum compatibel (10 ⁻⁷ mbar)	yes	
Temperature range	-10 °C - 70 °C	

DOWNLOADS



[NAe2_KS4-02.pdf](#)

RELATED PRODUCTS

FIBER CABLES PMC

Polarization-maintaining fiber cables

FIBER COUPLERS SINGLE-MODE/PM

Fiber Couplers for coupling into single-mode and polarization-maintaining fiber cables

FIBER COLLIMATORS SINGLE-MODE/PM

Fiber Collimators for collimating light exiting a single-mode or polarization-maintaining fiber cable

This is a printout of the page https://sukhamburg.com/products/details/SMC-400Si-3-10EV_28ETV-xxx from 5/4/2024

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