

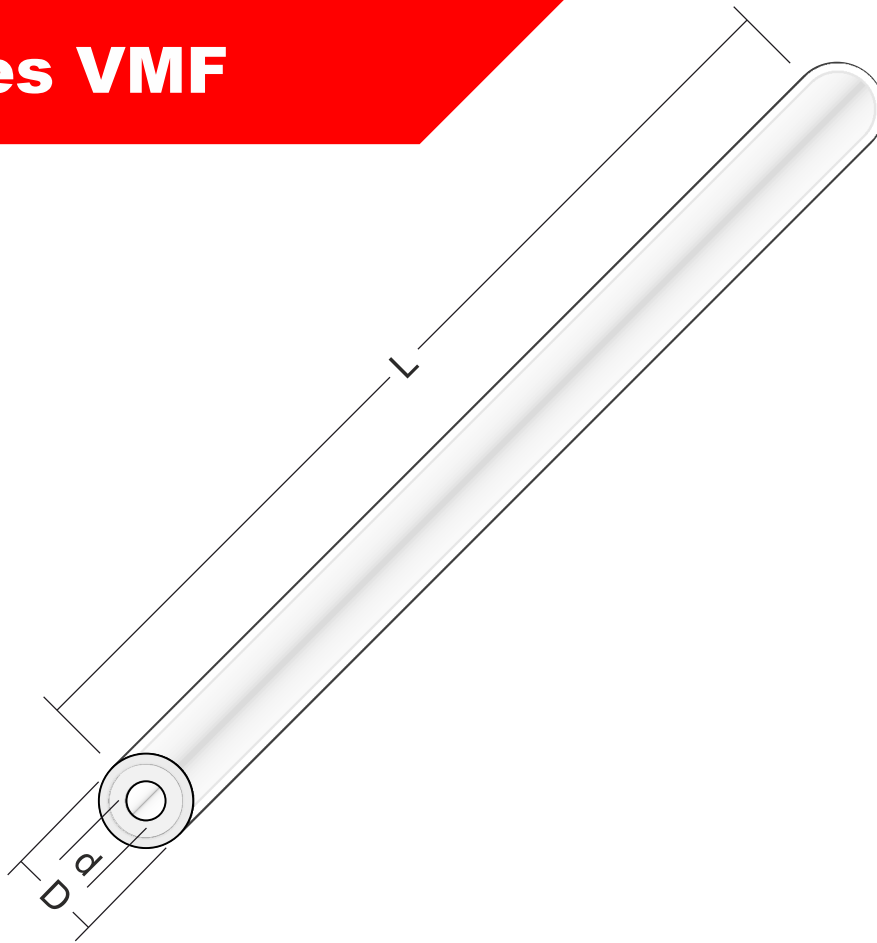
v-protect

fiber optic splice protectors

Heat Shrink Fiber
Optic Splice Protectors

Series VMF

TECHNICAL DATA SHEET



Part no.	D	L	d
VMF-10-XX	1,2	10	0,5
VMF-15-XX	1,2	15	0,5
VMF-20-XX	1,2	20	0,5
VMF-25-XX	1,2	25	0,5
VMF-30-XX	1,2	30	0,5
VMF-35-XX	1,2	35	0,5
VMF-40-XX	1,2	40	0,5
VMF-45-XX	1,2	45	0,5

All dimensions in mm. Other lengths are available on request.

D – Outer diameter after recovery
L – Length after recovery
d – Hole diameter before recovery
Dp – Pin diameter
Lp – Pin length
XX – Color

AVAILABLE COLORS

00 – transparent

SOLID COLORS

01 – black 07 – blue
02 – brown 08 – purple
03 – red 09 – grey
04 – orange 10 – white
05 – yellow 11 – pink
06 – green 12 – turquoise

TRANSPARENT COLORS

51 – black 57 – blue
52 – brown 58 – purple
53 – red 59 – grey
54 – orange
55 – yellow 61 – pink
56 – green 62 – turquoise

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Series VMF

Heat Shrink Fiber Optic Splice Protectors

VMF Mini FLEX Series fiber optic splice protectors have found their place in the production of laser modules, In-Line attenuators, Mode Conditioning Patchcords (MCP), etc. In order to reduce the diameter of the sheath after shrinking, the reinforcing wire has been omitted. The thickened wall of the outer jacket and the outer tube is responsible for stiffening the connection. They are used wherever there is limited installation space. Small size and flexible connection are the main advantages of this solution. Excellent climatic and thermal properties predispose them for use both in closed and open

spaces. At the design stage, the main objectives were: full protection of the welded optical fibres and small size after shrinking. In the production process, attention has also been paid to the initial shrinking of the sheath so as to eliminate the gap between the coatings. This protects the sheath against the loss of the inner coating and facilitates the insertion of the optical fibre. The final product is checked to meet the requirements set by the EN 50411-3-3 European Standard and GR-1380-CORE American Standard and ZN-96TPSA-006 standard of Polish Telecommunications. The sleeves we produce offer full protection to the fiber optic splices. They do not cause additional insert losses, and they offer protection against mechanical damage, pollution and weather conditions.

The VMF series is characterised by a small outer diameter (after shrinking $D=1.2\text{mm}$) and reduced length (the shortest $L=10\text{mm}$). The structure of the sheath consist of: an outer sheath with thickened wall and an inner sheath with a 0.5 mm opening. The protectors are dedicated to primary coated $250\mu\text{m}$ (fiber). The internal tube is made from special material with good adhesion to many materials and low solubility in water. It changes its consistency to semi-liquid in growth temperatures. This enables the space between the inner wall of the outer sheath and the optical fibre to be thoroughly filled, eliminating the formation of air bubbles. The outer sheath material guarantees durability as well as tensile and puncture resistance. It is characterised by optimum air permeability, high gloss and a smooth surface.



▣ Properties

- » Outer diameter after recovery: $1,2\text{ mm} \pm 0,05\text{mm}^*$
- » Hole diameter before recovery: $0,5\text{ mm} + 0,1\text{mm}^*$
- » Length of the protector after recovery: $L \pm 2/-1\text{mm}^*$
- » Minimum installation temperature: $110\text{ }^\circ\text{C}$
- » Max installation time: 60 sekonds
- » Standard color: transparent
- » RoHS compliant
- » Packing: 100pcs packed to one zip-bag (other packing method are available on request)

* – Tolerances in accordance with the requirements of EN 50411-3-3

▣ Application

- » Fiber Optic Solution
- » Telecommunication, INTERNET
- » CATV, Cable TV, Monitoring
- » Industry
- » LAN, MAN, WAN, FTTx

Series VMF

Heat Shrink Fiber Optic Splice Protectors

▣ Packing

- » The carton contains 1000 pcs fiber optic splice protectors. Standard packing consists of 10 zip bags with 100pcs of protectors each.

Other packaging methods are available on request.



▣ Environmental Specification

- » Storage temperature and humidity: from - 40 to +60°C, from 0 to 95%RH
- » Transport temperature and humidity: from - 40 to +80°C, from 0 to 95%RH
- » Installation temperature and humidity: from - 40 to +90°C, from 0 to 95%RH (no dew)
- » Operation temperature and humidity (after shrink): from - 55 to +105°C, from 0 to 95%RH

▣ References

Protectors meet the requirements of the following standards:

EN 50411-3-3 European standard:

- » Criterion 8.3.1: EN 61300-3-3; Change in attenuation: 1310&1550nm δ IL $\leq \pm 0,1$ dB per circuit of 5 protected fusion splices
- » Criterion 8.3.3: EN 61300-1-1; Vibration: 10-50Hz, amplitude 0,75mm, 15 cycles, 1550nm δ IL $\leq \pm 0,2$ dB durin -, δ IL $\leq \pm 0,1$ dB after - per circuit of 5 protected fusion splices
- » Criterion 8.3.5: EN 61300-2-5, Torsion: magnitude of load 2N, rotation angle +/- 180°, 10 cycles, 1310&1550&1625nm δ IL $\leq \pm 0,1$ dB after - per circuit of 5 protected fusion splices,
- » Criterion 8.3.6: EN 61300-2-4, Fiber/Cable retention: magnitude of load 2N, 60s, 1 cycle, 1310&1550&1625nm δ IL $\leq \pm 0,1$ dB after - per circuit of 5 protected fusion splices,
- » Criterion 8.3.7: EN 61300-2-7, Bending: magnitude of load 2N, 5s, 1 cycle, 1310&1550&1625nm δ IL $\leq \pm 0,1$ dB after - per circuit of 5 protected fusion splices,
- » Criterion 8.3.8: EN 61300-2-17, Cold: -40°C, 96h, 1310&1550nm δ IL $\leq \pm 0,2$ dB durin -, δ IL $\leq \pm 0,1$ dB after - per circuit of 5 protected fusion splices
- » Criterion 8.3.9: EN 61300-2-18, Dry heat: +80°C 96h, 1310&1550nm δ IL $\leq \pm 0,2$ dB durin -, δ IL $\leq \pm 0,1$ dB after - per circuit of 5 protected fusion splices
- » Criterion 8.3.10: EN 61300-2-19, Damp heat: from +25°C to +55°C, 93%Rh, 4 cycles, 96h 1310&1550nm δ IL $\leq \pm 0,2$ dB durin -, δ IL $\leq \pm 0,1$ dB after - per circuit of 5 protected fusion splices
- » Criterion 8.3.11: EN 61300-2-22, Change of temperature: from -40°C to +70°C, 12 cycles, 68h, 1310&1550nm δ IL $\leq \pm 0,2$ dB durin -, δ IL $\leq \pm 0,1$ dB after - per circuit of 5 protected fusion splices
- » Criterion 8.3.12: EN 61300-2-26; Salt mist: concentration NaCl 5%, +35°C 96h 6.5÷7.2PH, 1 cycle, 1310&1550&1625nm δ IL $\leq \pm 0,1$ dB after - per circuit of 5 protected fusion splices, additionally, there are no noticeable significant differences in the appearance of the tested product, such as traces of rust, discoloration, deformation.