

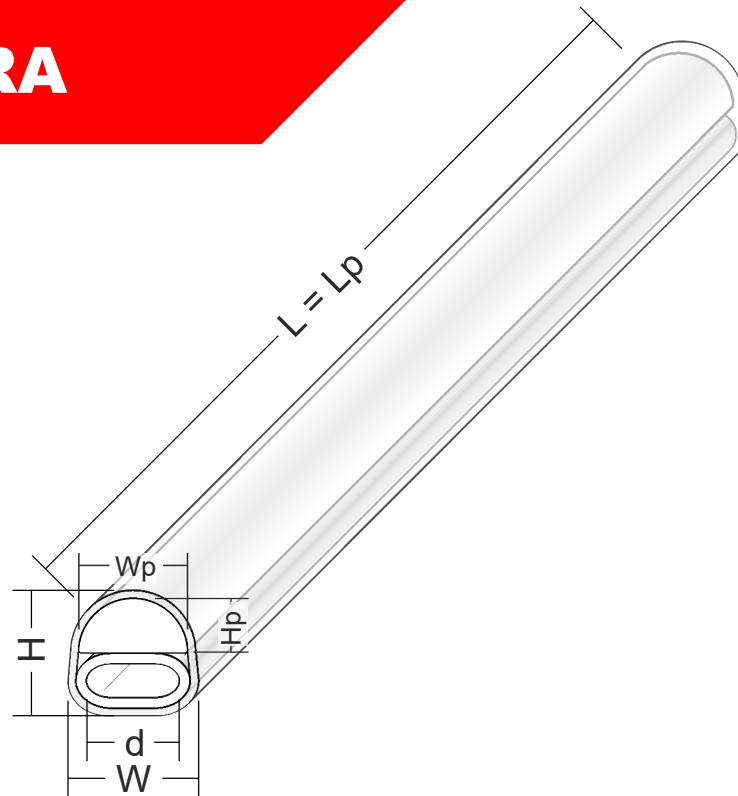
v-protect

fiber optic splice protectors

Heat Shrink Fiber
Optic Splice Protectors

Series VRA

TECHNICAL DATA SHEET



Part no.	W x H	L	d	Wp x Hp	Lp
VRA4-25-XX	3,4 x 3,1	25	2,0	3 x 1,5	25
VRA4-30-XX	3,4 x 3,1	30	2,0	3 x 1,5	30
VRA4-35-XX	3,4 x 3,1	35	2,0	3 x 1,5	35
VRA4-40-XX	3,4 x 3,1	40	2,0	3 x 1,5	40
VRA4-45-XX	3,4 x 3,1	45	2,0	3 x 1,5	45
VRA8-25-XX	4,4 x 4,0	25	2,5	4 x 2	25
VRA8-30-XX	4,4 x 4,0	30	2,5	4 x 2	30
VRA8-35-XX	4,4 x 4,0	35	2,5	4 x 2	35
VRA8-40-XX	4,4 x 4,0	40	2,5	4 x 2	40
VRA8-45-XX	4,4 x 4,0	45	2,5	4 x 2	45
VRA12-25-XX	4,5 x 4,5	25	3,4	4 x 2	25
VRA12-30-XX	4,5 x 4,5	30	3,4	4 x 2	30
VRA12-35-XX	4,5 x 4,5	35	3,4	4 x 2	35
VRA12-40-XX	4,5 x 4,5	40	3,4	4 x 2	40
VRA12-45-XX	4,5 x 4,5	45	3,4	4 x 2	45

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

Series VRA

Heat Shrink Fiber Optic Splice Protectors

x – Dedicated amount of fibers in the belt
W – Width of the protectors after recovery
H – Height of the protectors after recovery
L – Length after recovery
d – Hole width before recovery
Wp – Width of the reinforcement element
Hp – Height of the reinforcement element
Lp – Pin length (D type)
XX – Color

AVAILABLE COLORS

00 – transparent

▣ Product description

VRA RIBBON series protectors are applied in ribbon fiber optic cables of the RIBBON type. They enable to secure up to twelve fibers in one protector. Excellent climatic and thermal properties make it ideal for use in closed as well as open spaces. The main goals during design phase were: full protection of the fiber optic splices and quickness of assembly. Initial shrinking of the sleeve was taken into account during the production process to reduce the gap between the tubes. This protects the internal tube and ceramic strengthening element from falling out. The final product is checked to meet the

requirements set by the EN 50411-3-3 European Standard and GR-1380-CORE American Standard. 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.

VRA series is characterized by: ability to secure up to 12 fibers into one protector, quickness of assembly (60s). External diameter: VRA4 3.4x3.1mm, VRA8 4.4x4.0mm, VRA12 4.5x4.5 after shrinking. The sleeve consist of: a D-shaped ceramic strengthening element (dimensions: VRA4 1.5x3mm, VRA8 and VRA12 2x4mm), a thin external tube and an internal tube with a 2mm wide opening for up to 4 fibers or 1x2.5mm wide opening for up to 8 fibers or 1x3.4mm wide opening for up to 12 fibers. The protectors are dedicated to primary coated 250µm (ribbon fiber). The internal tube is made from special material EVA with good adhesion to many materials and low solubility in water. It changes its consistency to semi-liquid in growth temperatures. It enables to eliminate air bubbles through filling up the spaces between external tube, the Pin and fiber optic cable. The Pin that stiffens the splice is made from ceramic 95% Al₂O₃ Half Cylinder with heat extensibility indicator identical to that of optic fiber. This prevents from longitudinal stresses on the splice during heating process. Longitudinal stresses of the splice influence on growth a insert loss and a reflection loss. In extreme cases they may cause breaking the connection, which makes it necessary to repeat the splice procedure. External tube made from PEX, cross linked polyethylene. The material guarantees sustainability and resistance to stretching and puncture. It offers optimal air permeability, high gloss and smooth surface.



▣ Application

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

Series VRA

Heat Shrink Fiber Optic Splice Protectors

▣ Properties

- » Outer diameter after recovery:
 - VRA4: 3,4×3,1mm +/- 0,5mm *
 - VRA8: 4,4×4,0mm +/- 0,5mm *
 - VRA12: 4,5×4,5mm +/- 0,5mm *
- » Hole width before recovery:
 - VRA4: >2,0mm *
 - VRA8: >2,5mm *
 - VRA12: >3,4mm *
- » Length of the protector after recovery:
 - VRA4: L +2/-1mm *
 - VRA8: L +2/-1mm *
 - VRA12: L +3/-1mm *
- » Dimensions of the reinforcing element:
 - VRA4: 3×1,5mm
 - VRA8: 4×2mm
 - VRA12: 4×2mm
- » Minimum installation temperature: 110 °C
- » Max installation time: 120 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

▣ 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 $\delta IL \leq \pm 0,1dB$ per circuit of 5 protected fusion splices
- » Criterion 8.3.3: EN 61300-1-1; Vibration: 10-50Hz, amplitude 0,75mm, 15 cycles, 1550nm $\delta IL \leq \pm 0,2dB$ durin -, $\delta IL \leq \pm 0,1dB$ 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 $\delta IL \leq \pm 0,1dB$ 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 $\delta IL \leq \pm 0,1dB$ 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 $\delta IL \leq \pm 0,1dB$ after - per circuit of 5 protected fusion splices,
- » Criterion 8.3.8: EN 61300-2-17, Cold: -40°C, 96h, 1310&1550nm $\delta IL \leq \pm 0,2dB$ durin -, $\delta IL \leq \pm 0,1dB$ after - per circuit of 5 protected fusion splices
- » Criterion 8.3.9: EN 61300-2-18, Dry heat: +80°C 96h, 1310&1550nm $\delta IL \leq \pm 0,2dB$ durin -, $\delta IL \leq \pm 0,1dB$ 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 $\delta IL \leq \pm 0,2dB$ durin -, $\delta IL \leq \pm 0,1dB$ 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 $\delta IL \leq \pm 0,2dB$ durin -, $\delta IL \leq \pm 0,1dB$ 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 $\delta IL \leq \pm 0,1dB$ 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.