

## Indoor/Outdoor Cable with hr(A)-HF Jacket and Micro-modules

**Product Code:** [LAN-OFC-DUMxx-yy-HF](#)

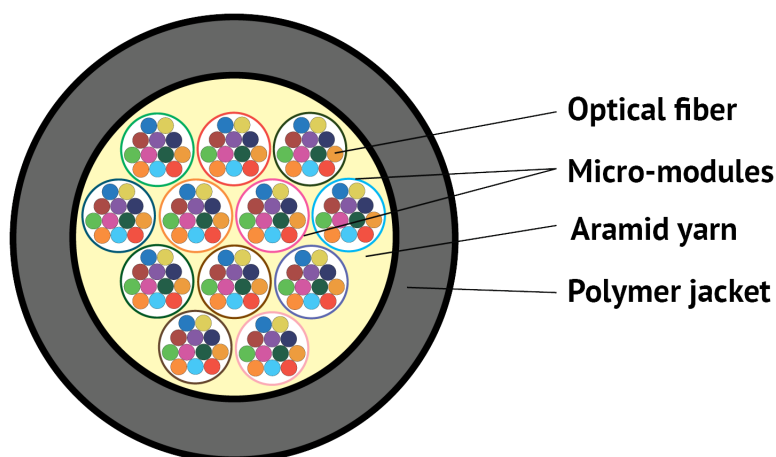
Indoor/Outdoor Cable with hr(A)-HF Jacket and Micro-modules

### Description

#### Application:

Used as a distribution cable for cabling inside buildings, in cable trays, in cable ducts, pipes and tunnels, as well as for cabling on external facades of buildings.

#### Design:



The cable contains a bundle of micro-modules with optical fibers which is covered with a layer of strength aramid yarn. The cable jacket is made of a flame retardant, halogen-free, low-smoke polymer composition. The cable jacket is made of a black polymer composition resistant to ultraviolet radiation.

The maximum possible count of optical fibers in the cable is 288.

#### Color identification of optical fibers and micromodules:

| Fiber color |             |    | Micro-module color |    |                 |
|-------------|-------------|----|--------------------|----|-----------------|
| №           | Fibers 1-12 | №  | Modules 1-12       | №  | Modules 13-24   |
| 1           | Blue        | 1  | Blue               | 13 | Blue + 1 mark   |
| 2           | Orange      | 2  | Orange             | 14 | Orange + 1 mark |
| 3           | Green       | 3  | Green              | 15 | Green + 1 mark  |
| 4           | Brown       | 4  | Brown              | 16 | Brown + 1 mark  |
| 5           | Grey        | 5  | Grey               | 17 | Grey + 1 mark   |
| 6           | White       | 6  | White              | 18 | White + 1 mark  |
| 7           | Red         | 7  | Red                | 19 | Red + 1 mark    |
| 8           | Black       | 8  | Black              | 20 | Black + 1 mark  |
| 9           | Yellow      | 9  | Yellow             | 21 | Yellow + 1 mark |
| 10          | Violet      | 10 | Violet             | 22 | Violet + 1 mark |
| 11          | Pink        | 11 | Pink               | 23 | Pink + 1 mark   |
| 12          | Turquoise   | 12 | Turquoise          | 24 | Turquoise + 1   |

| Weight and Dimensions: |                          |                    | mark                |
|------------------------|--------------------------|--------------------|---------------------|
|                        | Fiber count in the cable | Cable diameter, mm | Cable weight, kg/km |
|                        | 4 (1x4)                  | 5,6                | 32,2                |
|                        | 8 (2x4)                  | 6,0                | 35,5                |
|                        | 8 (4x2)                  | 6,4                | 39,1                |
|                        | 12 (2x6)                 | 6,2                | 37,9                |
|                        | 12 (6x2)                 | 6,8                | 43,5                |
|                        | 16 (4x4)                 | 6,6                | 41,4                |
|                        | 24 (4x6)                 | 7,0                | 45,6                |
|                        | 24 (6x4)                 | 7,1                | 46,7                |
|                        | 24 (12x2)                | 7,9                | 55,4                |
|                        | 32 (8x4)                 | 7,5                | 51,7                |
|                        | 36 (6x6)                 | 7,7                | 52,5                |
|                        | 48 (6x8)                 | 7,8                | 54,6                |
|                        | 48 (8x6)                 | 8,3                | 58,9                |
|                        | 48 (12x4)                | 8,4                | 61,0                |
|                        | 64 (8x8)                 | 8,5                | 61,5                |
|                        | 64 (16x4)                | 9,1                | 69,5                |
|                        | 72 (6x12)                | 8,3                | 59,3                |
|                        | 72 (12x6)                | 9,3                | 70,7                |
|                        | 96 (8x12)                | 9,0                | 67,3                |
|                        | 96 (12x8)                | 9,5                | 74,3                |
|                        | 96 (16x6)                | 10,1               | 81,5                |
|                        | 144 (12x12)              | 10,2               | 82,1                |
|                        | 144 (24x6)               | 11,6               | 101,5               |
|                        | 192 (16x12)              | 11,2               | 95,8                |
|                        | 192 (24x8)               | 12,0               | 108,0               |
|                        | 288 (24x12)              | 13,0               | 121,0               |

#### Operating conditions:

|                          |                             |
|--------------------------|-----------------------------|
| Operating Temperature    | -10°C...+50°C               |
| Installation Temperature | -10°C...+50°C               |
| Storage Temperature      | -50°C...+50°C               |
| Minimum Bend Radius      | At least 10 cable diameters |
| Lifetime                 | 25 years                    |

#### Physical specifications:

Optical cable is resistant to the following impacts

| Impact type                                                   | Nominal value                                       | Criteria for evaluation                 |
|---------------------------------------------------------------|-----------------------------------------------------|-----------------------------------------|
| Installation pulling tension (IEC 794-1-93 E1 test procedure) | 1600 N                                              | $\Delta\alpha^* \leq 0,05$ dB no damage |
| Long term pulling tension (IEC 794-1-93 E1 test procedure)    | 800 N                                               |                                         |
| Crush resistance (IEC 794-1-93 E3 test procedure)             | 100 N/cm                                            |                                         |
| Dynamic bending stresses (IEC 794-1-93 E6 test procedure)     | 20 cycles at an angle $\pm 90^\circ$                |                                         |
| Axial twisting stresses (IEC 794-1-93 E7 test procedure)      | - 10 cycles                                         |                                         |
|                                                               | - at an angle of $\pm 360^\circ$ at a length of 4 m |                                         |
| Impact (IEC 794-1-93 E4 test procedure)                       | Impact energy is 3 J                                |                                         |
| Climatic impact (IEC 794-1-93 F1 test procedure)              | - temperature range from minus 10 to 50 °C          | $\Delta\alpha \leq 0,05$ dB/km          |

- 2 cycles  
- cycle duration  $\geq$  16 hours

\* - increase in attenuation of an optical fiber in a cable at specific wavelengths.

| Product code                                 | Description                                                                                                   |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| LAN-OFC-DUMxx-yy-HF                          | Indoor/outdoor FO cable, Distribution, HF(A)-HF, <b>xx (nn x mm)</b> fibers, OS2 Ultra/OM1/OM2/OM3/OM4, black |
| xx – fiber count                             |                                                                                                               |
| yy – fiber type (SU, S5, S7, M1, M2, M3, M4) |                                                                                                               |
| nn – micro-modules count                     |                                                                                                               |
| mm – fibers count in micro-module            |                                                                                                               |

#### Applicable optical fibers:

|    |                                                                                                                                                    |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------|
| SU | Single-mode fiber with extended operating wavelength and reduced attenuation and low bending loss (ITU G.652D+G.657.A1 recommendation)             |
| S5 | Single-mode fiber with an extended bandwidth of operating wavelengths (ITU-T G.652D recommendation)                                                |
| S7 | Single-mode positive non-zero dispersion shifted fiber (ITU-T G.655 recommendation)                                                                |
| M1 | Single-mode with low bending loss (ITU-T G.657 recommendation)                                                                                     |
| M2 | Multi-mode with core to cladding ratio 62,5/125 $\mu$ m (IEC 60793-2-10 A1b type recommendation)                                                   |
| M3 | Multi-mode with core to cladding ratio 50/125 $\mu$ m (ITU-T G.651 recommendation and IEC 60793-2-10 type A1a.1 requirements)                      |
| M4 | Multi-mode with low bending loss and core to cladding ratio 50/125 $\mu$ m (ITU-T G.651 recommendation and IEC 60793-2-10 A1a.2 type requirements) |

*The cable is supplied on request. Check the availability and delivery time with the company's managers.*

## Model range

|                     |                                                             |
|---------------------|-------------------------------------------------------------|
| LAN-OFC-DUM8-S2-HF  | Indoor/Outdoor Cable with HF(A)-HF Jacket and Micro-modules |
| LAN-OFC-DUM8-M2-HF  | Indoor/Outdoor Cable with HF(A)-HF Jacket and Micro-modules |
| LAN-OFC-DUM8-M3-HF  | Indoor/Outdoor Cable with HF(A)-HF Jacket and Micro-modules |
| LAN-OFC-DUM8-M4-HF  | Indoor/Outdoor Cable with HF(A)-HF Jacket and Micro-modules |
| LAN-OFC-DUM12-S2-HF | Indoor/Outdoor Cable with HF(A)-HF Jacket and Micro-modules |
| LAN-OFC-DUM12-M2-HF | Indoor/Outdoor Cable with HF(A)-HF Jacket and Micro-modules |
|                     |                                                             |

|                     |                                                                          |
|---------------------|--------------------------------------------------------------------------|
| LAN-OFC-DUM12-M3-HF | Indoor/Outdoor Cable with H <sub>r</sub> (A)-HF Jacket and Micro-modules |
| LAN-OFC-DUM12-M4-HF | Indoor/Outdoor Cable with H <sub>r</sub> (A)-HF Jacket and Micro-modules |

Product descriptions are listed according to the available information at the time of publication. Product specifications can be changed without advanced notification. More detailed and exact information can be obtained from the official partners and distributors of LANMASTER.