# FiberOptic



EN

LED

LEDLine

DecoPendant

CromaDown

WallWasher

CromaStreet

CromaFloor

AquaCroma

CromaGardena

CromaBollard

LEDCell

Electronic

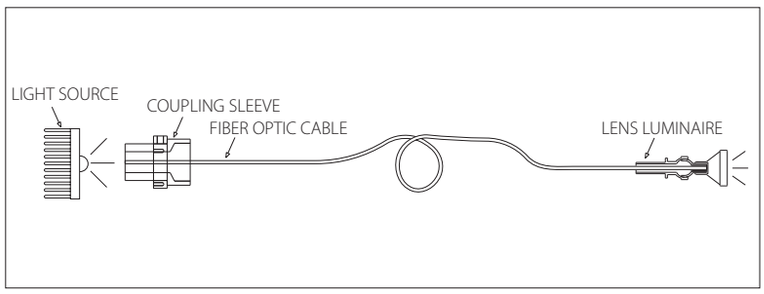
**FiberOptic**

Contemporary illuminating tehcnics...

**24.3** Fiber Optic Products Catalogue

Fiberli

LED
LL
DP
CD
WW
CS
CF
AC
CG
CB
LC
EL
FO




# FiberOptic

Fiber optic lighting is the transmission of light, generated by a light generator, to the desired area through the medium of fiber optic cables. The source of light undertakes the task of light generation and the fiber optic cable, the task of light transmitter. The only limit in designing with the fiber optic lighting systems is your imagination. You can apply almost everything that you imagine. The most fundamental characteristics of fiber optic lighting technology, which creates its difference to other lighting technologies, are FREEDOM and FLEXIBILITY. You have the freedom to place the light source, used for the fiber optic lighting systems, at any desired location. This notion of freedom comes with plenty of advantages.

Fiber optic lighting system is comprised of 2 main parts:
- Light source
- Fiber Optic cable harness

(*) *LENS Luminaires can also be used if demanded accordingly to the above.*

The Fiber Optic cables are harnessed after being cut in compliance with the prepared project, architectural design or requirement. These harnesses are placed to the light source (point of origin of light) with terminal sleeves. Thus, the light, generated by the light source, is transmitted through the fiber optic harness to the luminaire or directly bare fiber optic end. A single Fiber optic cable harness is comprised of fiber optic cables, with the same or different diameters or lengths, which are completely determined according to your needs. Fiber optic lighting system delivers a lighting marvel, which we can dare say to be extraordinary and which will stretch the imagination in architectural designs, by virtue of the separation of luminaire and light source via fiber optic cables. The luminaires to be used include a wide range of variety, depending upon the architecture of the venues (such as crystal end, terminal end, lens luminaires).

Intended Use of Lens Luminaire
- Gaining an aesthetic appearance
- Gaining a more intensive light
- In situations where spot lighting is demanded
- In situations where flood lighting is demanded

Additionally, these luminaires also take precedence over the conventional lighting components due to their smaller dimensions and offering the capability to be equipped with optic lenses. The outlet angle of the light can be lowered to 1° from 120° with luminaires selected for proper use, in order to increase the light intensity. Thus, the desired effect can, clearly, be achieved.


IK7


IK77


IK16


IKL150


FOK


LENS

www.fiberli.com.tr/Upload/Dokuman/FiberOptic-EN.pdf

# FiberOptic Product

## LIGHT SOURCES

### IK7 Light Source 7

Low-powered LED light source

### IK77 Light Source 77

High-powered LED light source

### IK16 Light Source 16

Halogen light source

### IKL150 Light Source L150

General purpose Fiber Optic light source

## FIBER OPTIC CABLES

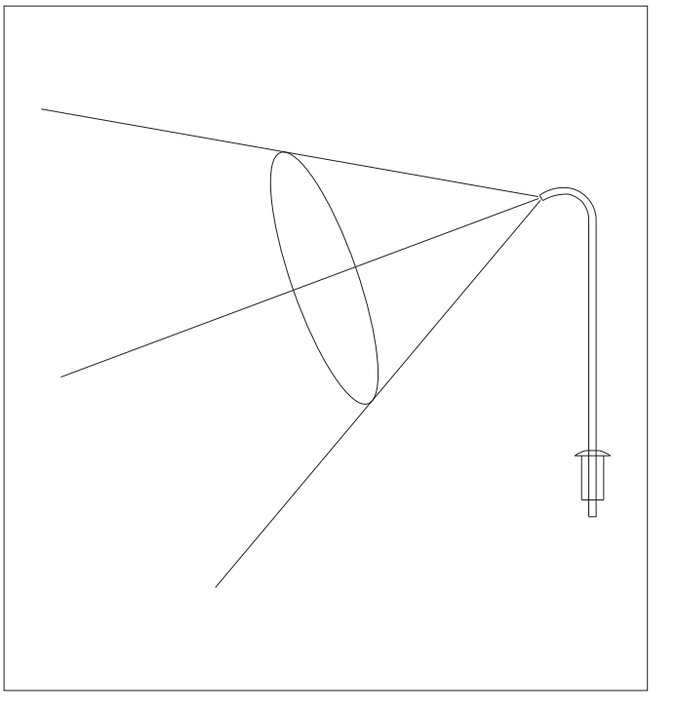
### FOK FiberOptic Cable

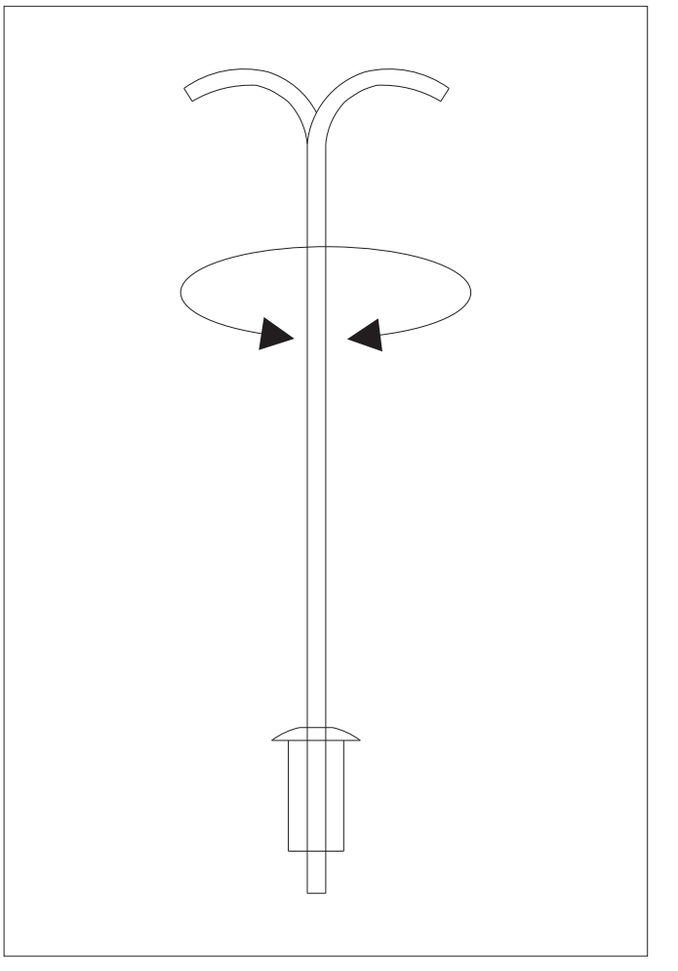
Various fibre optic cable options for fibre optic lighting

## FIBER OPTIC LENSES

### Lens FiberOptic Lenses

These are utilised to cloak, disambiguate the outlet of light, to offer an aesthetical appearance or to direct the light.





IK7

IK77

*Protection Class: IP44 / IP65*

*Lifetime: 50.000 hours*

# Light Source 7 & 77 IK7 - IK77

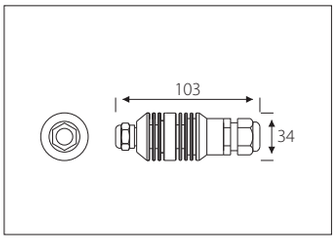
*LED Light Source*

## APPLICATION AREA

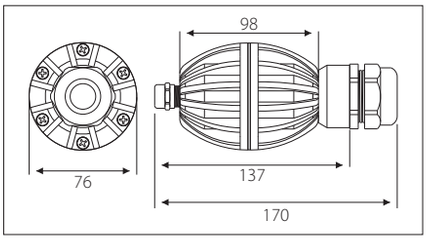
As the LED light source is produced with Light LEDs for fiber optic application, these products offer low consumption (1W – 5W), low investment costs, quite long bulb lifespan, 0dB noisy (noiseless), low voltage (5-12V) products. The lighting levels of this source are somewhat lower than other light sources. These products are generally used in dark environments such as bedrooms of houses, hotel rooms, kid's rooms, star surface effect, etc. These are manufactured as colour changing and colour constant. They are also manufactured in conformity with IP44 Protection class standard. LED light sources operates problem-free without the need for maintenance for an extended period of time in every environment under 70°C including in- and outdoor venues, underwater and underground environments.

## LUMINAIRE SPECIFICATIONS

- Aluminium injection body




**IK7** (Ø76x170mm)

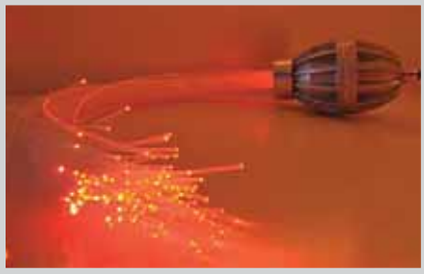



**IK77**

## CONTROL SYSTEM

The product can directly be DMS-derived by means of the DMS recorder placed within the product. The product can be dimmed or the colour changing program, inserted to the product, can be ran or other driving options can also be applied or the product can passively be controlled.

## Light Source 7 & 77



# Light Source 16 IK16

*Halogen Light Source*

*Protection Class: IP44*

*Lifetime: 50.000 hours*

## APPLICATION AREA

The halogen light source is manufactured at 50W, 75W and 100W with Lighting Halogen bulbs. They have a bulb lifespan of 3000 - 4000 hours. The light sources generate noise at the level of 30dB at utmost, due to their cooling process with a Fan. They operate with 220 V AC mains voltage. The light sources feature colour changeability and/or moiré lighting specifications. The halogen light sources generate a fair amount of infrared rays due to the bulbs and these rays lead to heat generation. In order to eliminate the detrimental effects of this heat, dichroic IR (heat) filters are placed in front of the bulb.

## ELECTROMECHANICAL SPECIFICATIONS

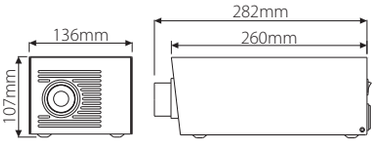
- Aluminium body

## PRODUCT OPTIONS

| Product Code | Lamp Type | POWER CONSUMPTION | Lifetime | Voltage | Noise Factor | Colour Engine | Controller | Colour Disc |
|---|---|---|---|---|---|---|---|---|
| IK16 | Halogen | 50W<br>75W<br>100W | 3.000 s<br>1.000 s<br>50 s | 220V AC | < 54db | Stepper<br>no<br>synchronous | DMX<br>synchronous | Dichroich<br>metal moire<br>stained-glass |

## MOUNTING OPTIONS

Luminaire dimension 282mm x 136mm x 107mm





# Light Source L150 IKL150

*General purpose Fiber Optic light source*

## APPLICATION AREA

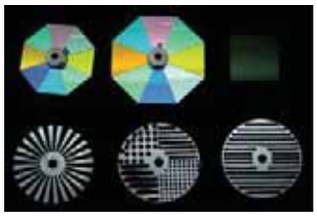
Light can be produced at 50W power in 4 different alternatives. Features protection against overheating. Operates with 220 V AC mains voltage. Features colour changing at light sources and / or moire lighting. Apart from fibre optic applications for decorative purposes, UV and infrared, as they do not generate harmful lights, can conveniently be utilised for the illumination of invaluable museum properties, paintings and for medical illumination.

## ELECTROMECHANICAL SPECIFICATIONS

- DKP sheet body

## PRODUCT OPTIONS

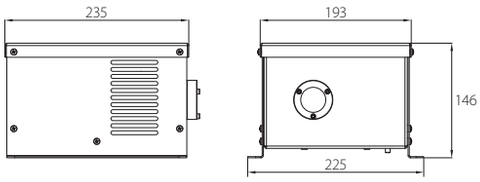
| Product Code | Properties | Control System | Lifetime | LED Type | LED Quantity | Light Colour | POWER CONSUMPTION | Working Voltage |
|---|---|---|---|---|---|---|---|---|
| IKL 150D | light intensity can be dimmable | Analog 1-10V DC | 50.000 hours | Multi-Chip | 1 | CW, NW WW | min. 18W max. 55W | 220V AC |
| IKL 150H | Wavy effect | - | 50.000 hours | Multi-Chip | 1 | CW, NW WW | 55W | 220V AC |
| IKL 150 RGB | All colour tones can be attained with RGB | 3 channel PWM | 50.000 hours | P5 - II | 14 | RGB | 55W | 220V AC |
| IKL 150 DMX | All colour tones can be attained with RGB | 3 channel DMX 512A | 50.000 hours | P5 - II | 14 | RGB | 55W | 220V AC |

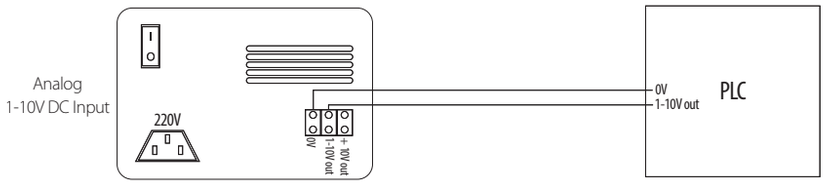


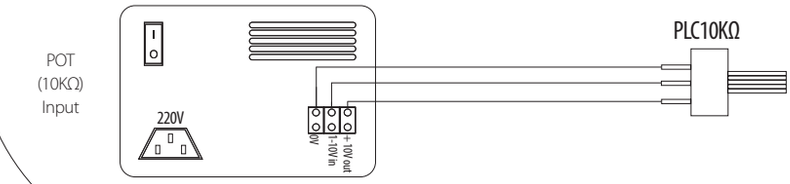
**Colour Disk:**
Colour changing or light control is performed with colours discs connected to the asynchronous engine.

**Colour Engine:**
Colour changing is performed synchronous cards or DMX system.

## MOUNTING OPTIONS




*Protection Class: IP44*

*Lifetime: 50.000 hours*



LED LIGHT CE

# FIBER OPTIC CABLES FOK

*Fiber optic cable options*

## FIBER OPTIC CABLES

These are the system's basic components and enable the transportation of the light, generated at the light source, to the area of usage. The fiber optic cables are lifetime guaranteed, except the circumstances of application of force and fading or degradation would not occur in the light transported by such cables. Fiber optic cables can be applied anywhere between the temperatures of +110°C and -40°C and are resistant against adverse conditions such as underground, underwater, inner concrete and humid areas. Due to being light transporters, these cables do not cause any risk of electricity. All of the fiber optic cables, utilised for our products, are fiber optic cables manufactured by the Mitsubishi Company. Mitsubishi, which has been manufacturing fiber optic cables since 1975, is one of the best companies throughout the world in this regard. Mitsubishi, aside from our company, exports these cables to many highly qualified companies, located in the States and Europe. Fiber optic cables are manufactured as bared in two main forms which are glass and acrylic. The cutting and shaping, forming harnesses, encasement and finishing of fiber optic cables, depending on needs, which we import in reels, unprocessed, are performed by our company.

## ACRYLIC FIBER OPTIC CABLES

PolyMethyl Methacrylate (PMMA) is utilised as a basic substance for the structures of these cables. These are manufactured in diameters between 0.25 mm and 3 mm. The cables can provide long term runtime between the degrees of -40 and +70 °C and short term runtime up to +110°C. These can enable the transportation of the generated light, when affixed to the light outlets of light sources. As these cables can radiate from ends, they can also be ensured to give off light from the side after being harnessed or braided or to transport more quantity of light by being harnessed and encased. The cutting of parts of the cables, which are affixed to the light sources, require quite a specific technology, thus making the on-site manufacturing of fiber optic systems rather difficult. Due to the aforesaid fact, we forge package systems, by merging the ends of fibre optic cables, in a given number and dimensions or prepare cables at the required dimensions and quantities.

Lighting Yield of Acrylic Fiber Optic Cables (According to the data of Mitsubishi / ENKA)

| 1m | 2m | 3m | 4m | 5m | 6m | 7m | 8m | 9m | 10m |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0,97 | 0,92 | 0,88 | 0,86 | 0,82 | 0,79 | 0,76 | 0,73 | 0,71 |

Lighting Yield of Glass Fiber Optic Cables (According to the data of Mitsubishi / ENKA)

| 1m | 2m | 3m | 4m | 5m | 6m | 7m | 8m | 9m | 10m |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0,93 | 0,90 | 0,83 | 0,78 | 0,76 | 0,73 | 0,69 | 0,67 | 0,63 |

MITSUBISHI

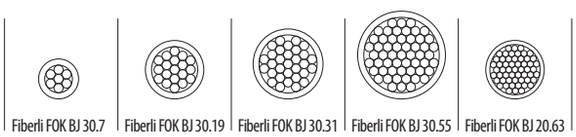
## NON-SHEATHED CABLES

| Section | Product Code | Diameter | Section area | mkr/m |
|---|---|---|---|---|
| · | Fiberli FOK 10 | 0,25mm | 0,049mm$^2$ | 12.000 |
| • | Fiberli FOK 20 | 0,50mm | 0,196mm$^2$ | 6.000 |
| • | Fiberli FOK 30 | 0,75mm | 0,441mm$^2$ | 2.700 |
| • | Fiberli FOK 40 | 1,00mm | 0,785mm$^2$ | 1.500 |
| ● | Fiberli FOK 60 | 1,50mm | 1,766mm$^2$ | 700 |
| ● | Fiberli FOK 80 | 2,00mm | 3,140mm$^2$ | 250 |
| ● | Fiberli FOK 100 | 2,50mm | 4,906mm$^2$ | 250 |
| ● | Fiberli FOK 120 | 3,00mm | 7,065mm$^2$ | 150 |

# FiberOptic Cables

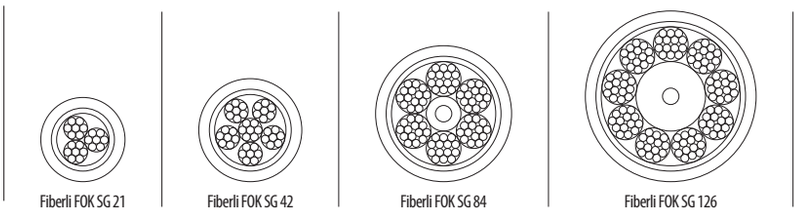
## END RADIANT SHEATED CABLES

| Product Code | Diameter | Section area | Instruction | mkr/m |
|---|---|---|---|---|
| Fiberli FOK BJ 30 | 0,75 | 0,441 | Black Jacketed PMMA | 500 |
| Fiberli FOK BJ 40 | 1,00 | 0,785 | Black Jacketed PMMA | 500 |
| Fiberli FOK BJ 30.7 | 3,25 | 3,080 | Black Jacketed PMMA | 100 |
| Fiberli FOK BJ 30.19 | 4,75 | 8,380 | Black Jacketed PMMA | 100 |
| Fiberli FOK BJ 30.31 | 5,60 | 13,68 | Black Jacketed PMMA | 100 |
| Fiberli FOK BJ 30.55 | 7,12 | 24,25 | Black Jacketed PMMA | 100 |
| Fiberli FOK BJ 20.63 | 3,25 | 3,080 | Black Jacketed PMMA | 100 |

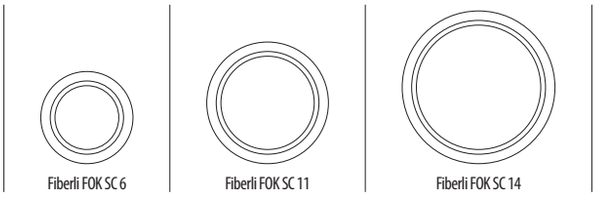

## SIDE RADIANT SHEATED CABLES MULTICORE

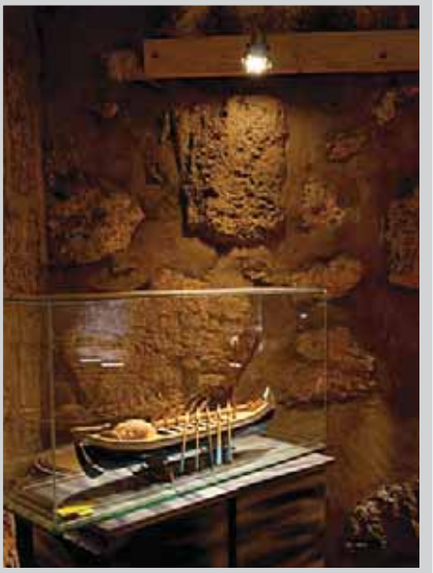
| Product Code | Diameter | Quantity | Instruction |
|---|---|---|---|
| Fiberli FOK SG 21 | 75 | 21 | Transparent Jacketed Mitsubishi PMMA |
| Fiberli FOK SG 42 | 75 | 42 | Transparent Jacketed Mitsubishi PMMA |
| Fiberli FOK SG 84 | 75 | 84 | Transparent Jacketed Mitsubishi PMMA |
| Fiberli FOK SG 126 | 75 | 126 | Transparent Jacketed Mitsubishi PMMA |

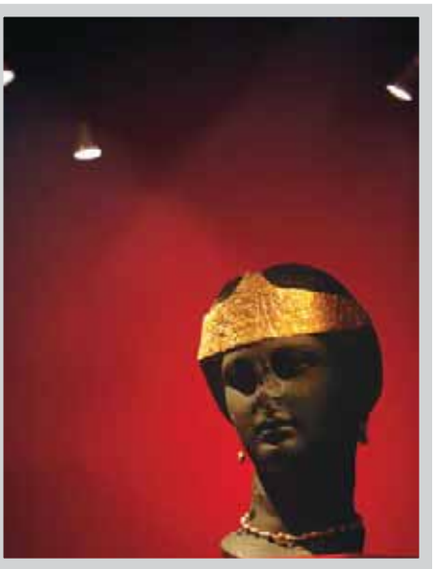


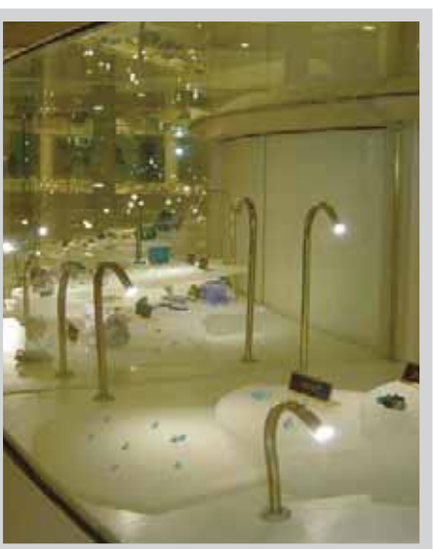

## SIDE RADIANT SHEATED CABLES SOLIDCORE

| Product Code | Diameter | Quantity | Instruction |
|---|---|---|---|
| Fiberli FOK SC 6 | 6 | - | Transparent Jacketed PMMA |
| Fiberli FOK SC 11 | 11 | - | Transparent Jacketed PMMA |
| Fiberli FOK SC 14 | 14 | - | Transparent Jacketed PMMA |







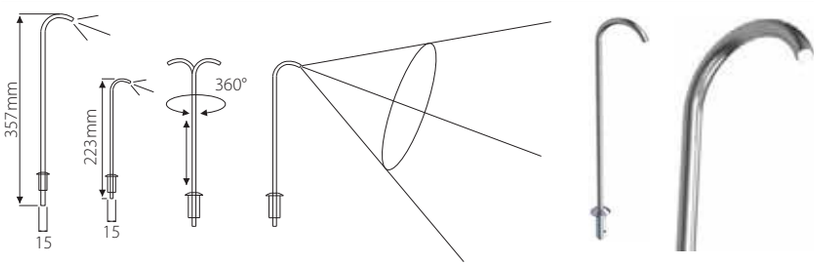
# Lenses

*Lens options for fibre optic cable outlets*

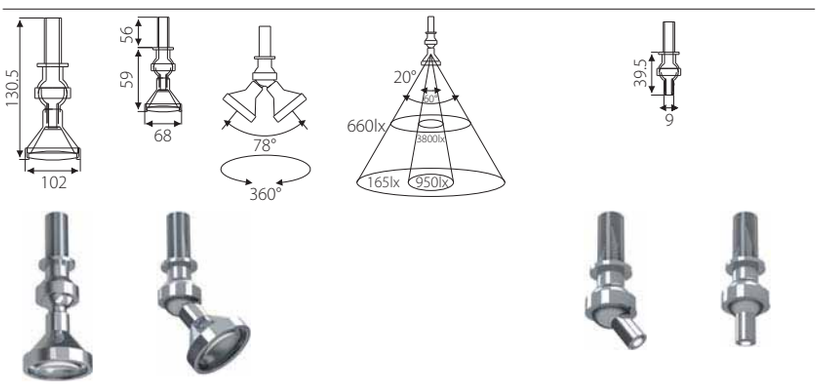
## APPLICATION AREA

The outlet angle of the light transported with fibre optic cables from the end-point is approximately 60˚. This angle is, in general terms, sufficient for many areas of use. However, in the case of need towards a wider or a more acute angle, the requested angles can be provided with lenses. Lenses can also be utilised to hide, relieve, aestheticize the outlet of the light or to direct the light.

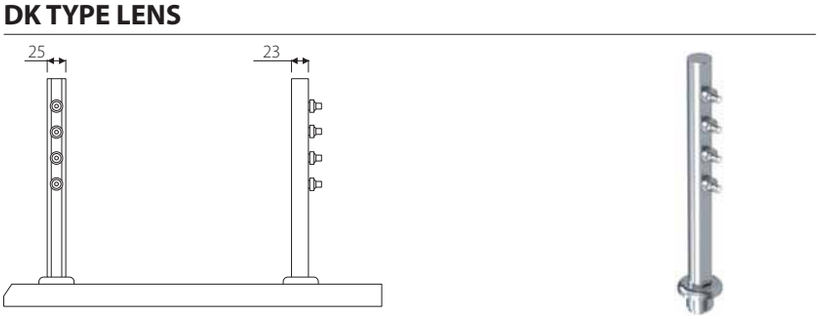
## L TYPE LENS




## G TYPE LENS

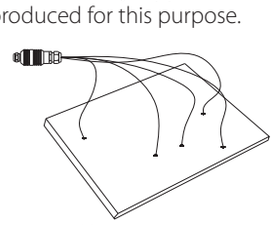



## DK TYPE LENS




## PACKAGE PRODUCTS (IK7 SET ATTACHMENT)

The fibre optic cable harnesses, which are prepared in various diameters and dimensions, offer ease of application in small-scaled applications. You can also perform many applications on your own with the package product, which we produced for this purpose.



Mounting

**Contemporary illuminating technics**

www.psl.com.tr | www.fiberli.com

Fiberli by PSL ELECTRONIC