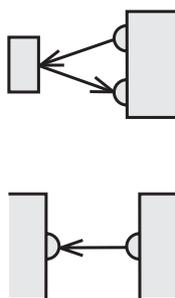


# Plastic Light Guides for Direct Detection or Through-Beam Operation



## TLK70-K40-P-2000

The triangular shape of the light guide heads and the different methods of fixing them on a base plate enables them to be used in various applications:

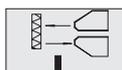
- Direct detection
- Retro-reflective operation
- Through-beam operation
- Triangulation

### Direct detection



If both light guide heads are fixed **parallel** to the base plate, then direct detection or reflex operation is possible.

### Retro-reflective operation



A blind zone exists in front of the heads. This is larger in reflex operation than in direct detection (diffuse reflection). The actual size of the zone depends on the application.

### Through-beam operation

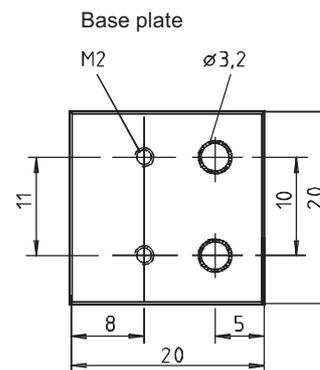
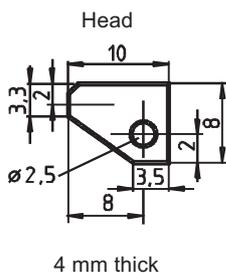
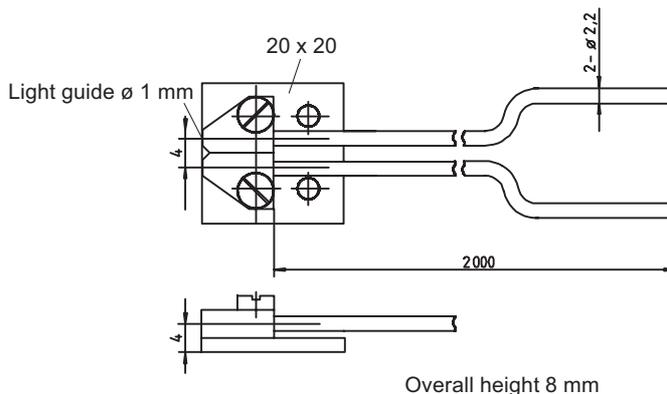
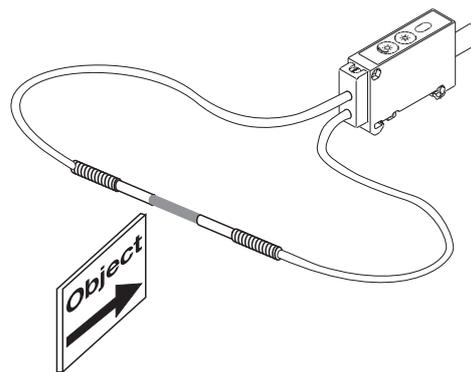


Through beam operation is achieved by removing the base plate and mounting the heads so that they are mutually opposed on a **common** reference axis.

### Triangulation



By loosening and changing the positions of the heads on the base plate, the heads can be inclined at an arbitrary angle to each other. The reference axes of the light guides then form a triangle and objects are detected which are located at the point of intersection of the axes.

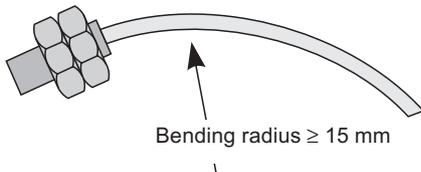


Aluminium 2 mm thick

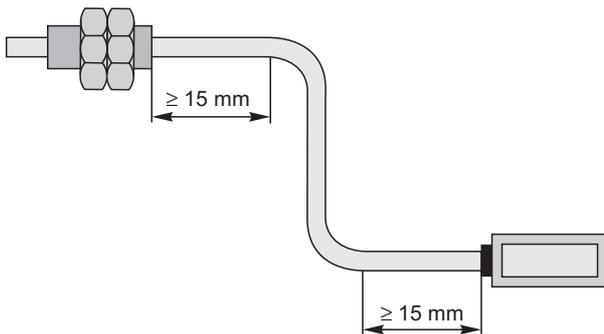
# Mounting Notes for Plastic Light Guides

## Mounting and adjustment

When laying and routing plastic light guides, the minimum bending radius of 15 mm must be unconditionally maintained.



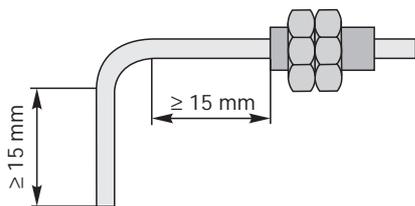
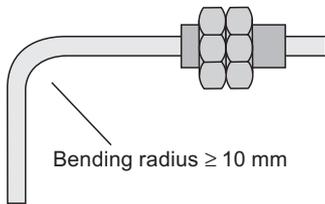
There must not be any bends for a distance of 15 mm from both the sensor and the light guide head.



Should it be necessary to bend the stainless steel head ferrule, a minimum bending radius of 10 mm must be strictly adhered to.

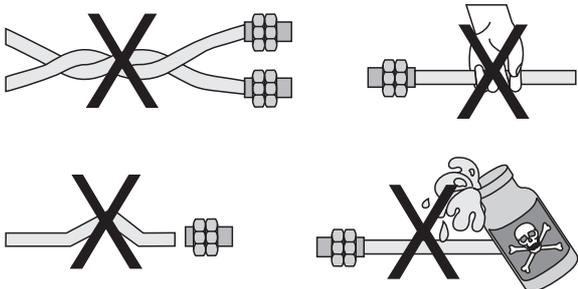
The light guide should not be bent within 15 mm of the end of the covering and the head.

Damage to the light guide may result if this is not observed.



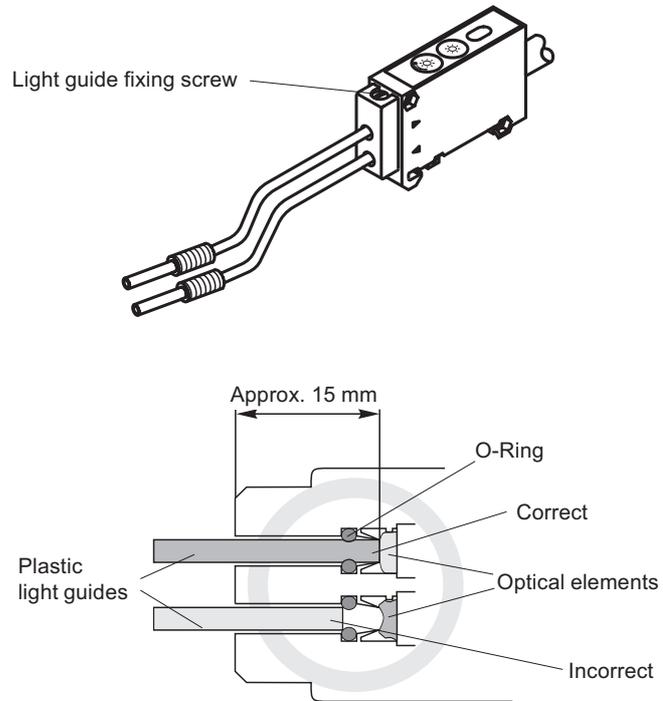
## Caution !

Plastic light guides must not be twisted or kinked and excessive tensile loads will lead to destruction. Contact with petrol or organic solvents must be prevented.



## Connection to photoelectric sensor OJ 100-F6...

Insert the light guide into the opening in the sensor until some resistance is felt (O-ring). Push the light guide further into the sensor until the end is up against the optical element. Tighten the screw to fix the light guide in position. The sensor / light guide assembly is now ready for use.



## Cutting to length

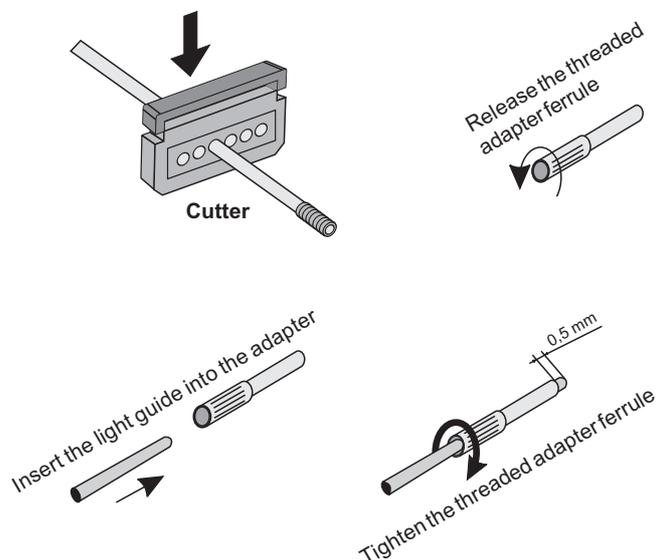
Plastic light guides can be cropped to any desired length using the supplied **disposable cutter**.

**Important: Each cutting position can be used once only**

## Adapter

In order to ensure a reliable connection, the adapter supplied must only be used for plastic light guides of 0.5 mm diameter.

**Important: The light guide end must project 0.5 mm beyond the adapter.**



Date of issue 13.01.1998