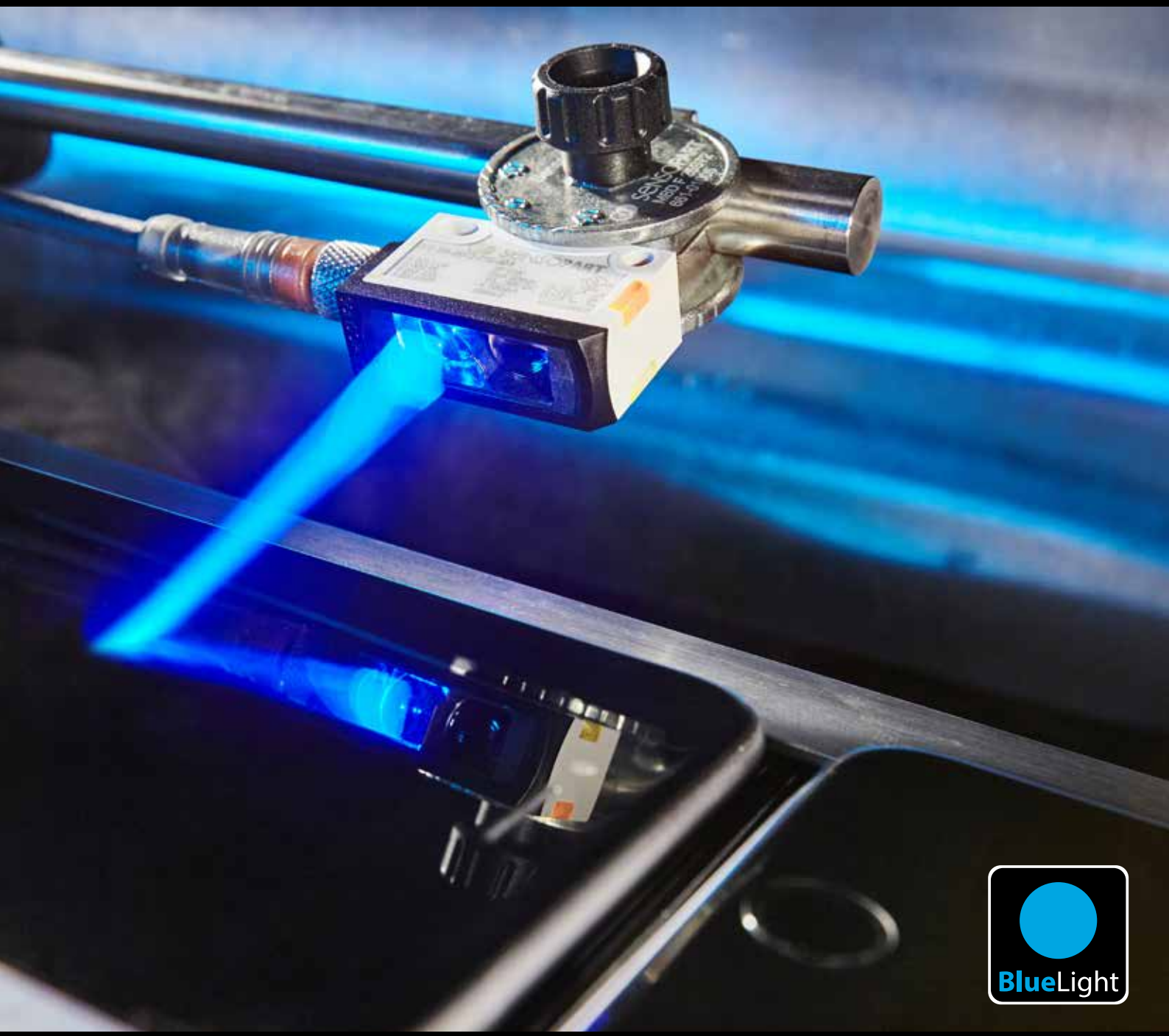
SENSOPART

BlueLight opens up new angles of vision.

Simple detection of transparent and dark objects with blue light photo electric sensors.



Blue light in three sizes.

BlueLight sensors from the F 10, F 25 and F 55 series.

Developed specifically for recognising objects that are difficult to detect, BlueLight sensors are true all-rounders.
The BlueLight series offers much greater detection efficiency in special applications – even with very dark or highly transparent objects. Reflective surfaces are also no longer a problem!

BLUELIGHT FEATURES

- Reliable detection of highly transparent or strongly light-absorbing objects
- Reliable detection even at angles of almost 90° (e.g. with round objects)
- World's first blue light sensor with background suppression in subminiature format
- Absolute background suppression using SensoPart BGS technology – critical background situations are no longer an issue
- Adjustable background suppression

The BlueLight series consists of three fixed-focus devices (2 to 30 mm, 2 to 50 mm, 0 to 80 mm), as well as an adjustable photo electric sensor with a maximum range of 1.2m.

The first BlueLight sensor was the subminiature F 10 BlueLight photo electric sensor, with a maximum scanning range of 30mm. SensoPart launched this back in early 2014. The range has since been expanded to include another subminiature version (max. scanning range 50 mm) as well as models in miniature (F 25 Blue-Light series, max. scanning range 80 mm) and compact formats (F 55 BlueLight series, max. scanning range 1200 mm). These three models all correspond with industry-standard designs. The larger models enable applications with significantly higher scanning ranges.

BlueLight

BlueLight – Product overview				
	Type of light	Adjustment	Scanning distance/Range	Special features
Photoelectric proximity sensor with background suppression				
FT 10-BF2	LED, blue	Fixed focus	2...30 mm	World's first blue light sensor BGS with absolute background suppression
FT 10-BF3	LED, blue	Fixed focus	2...50 mm	
FT 25-BF2	LED, blue	Fixed focus	0...80 mm	IP 69K & IP 67 High-precision background suppression
FT 55-BH	LED, blue	Adjustable (potentiometer)	3...1200 mm	IP 69K & IP 67 High-precision background suppression

Transparent objects from new angles of vision.

Blue light - the solution for challenging applications.

Examples of sectors and applications

Packaging industry

- Detection of transparent film / containers / labels / blister packs

Plastics industry

- Presence and positioning of dark plastic parts

Medical technology / Pharmaceuticals / Laboratory automation

- Presence of transparent test tubes / syringes / pipette tips
- Positioning of transparent or deep black racks and microtiter plates

Automotive industry

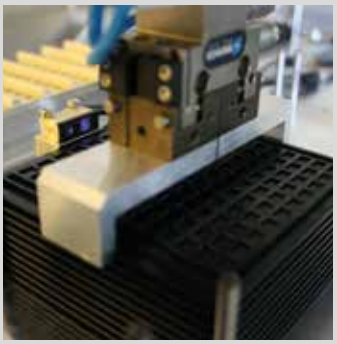
- Detection of metal parts and black plastic components

Solar industry

- Presence and positioning of wafers

Beverage industry

- Presence of bottles or dark plastic lids



The specialist solutions for demanding situations

Both transparent and deep black parts present enormous challenges for proximity sensors. Sufficient process stability cannot always be achieved during detection, in which case proximity sensors ultimately have to be replaced by more expensive photoelectric models.

Blue light sensors, however, constitute a cost-efficient alternative, offering much greater process stability than conventional red light proximity sensors in many critical applications.

Other situations that frequently pose a problem for red light proximity sensors are those involving high gloss, sloping or convex surfaces as well as oblique incidence due to the lateral position of the sensor. In these cases a considerable proportion of incident light is deflected away from the proximity sensor's receiver. Many applications also include a combination of several critical factors, e.g. black objects with a high gloss surface and a wide detection angle.

Even faced with such multiple challenges, blue light sensors have proven their worth.

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Blue light makes black visible.

Sensors with blue light

They are small, black and are rapidly multiplying: the number of dark to deep black plastic parts is constantly growing throughout all sectors.

BlueLight sensors are now successfully used in a wide range of applications involving light-absorbing objects. For example, to detect the presence of carbon fibre components or matte black interior trim panels in the automotive industry or black, round plastic caps on a conveyor belt. BlueLight sensors also prove outstanding when detecting black or reflective metal parts.

The simple and cost-efficient blue light sensor is now the answer for these and many other applications and is also replacing the retro-reflective photoelectric sensors previously in use.

In subminiature housing
Measuring just 21.1 x 14.6 x 8mm, the F 10 BlueLight is perfect for installation in confined spaces.

So why SensoPart BlueLight technology?

Increased detection efficiency is achieved by the higher intensity of blue light and by the varying interaction of different light colours with the surface of the target object. Short-wave blue light does not penetrate as deeply into the target object as red light and a greater proportion is therefore reflected. This can be a decisive feature when detecting poorly reflective transparent objects.

SensoPart BlueLight sensors are also equipped with: a high-precision optical concept tailored specifically to blue light, a sophisticated electrical design and SensoPart receiver technology with the best background suppression on the market. A combination of the latest algorithms and SensoPart BlueLight technology opens up completely new possibilities in the detection of 'difficult' objects.

The sensor achieves very high process stability with transparent objects thanks to its instantaneous response at the respective maximum scanning range and the low hysteresis between the switch on and switch off point. This is also valid for rounded target objects, e.g. bottles or cannulae, even though there is less diffuse reflection.

The sensors' reliability is also enhanced by high-precision background suppression: Even very bright or reflective backgrounds, such as reflections from metal machine parts, do not interfere with the detection process.

Unique feature: the compact sensor from the F 55 BlueLight series is equipped with background suppression that can even be adjusted with the aid of a potentiometer.

We look ahead

Yesterday, today and in the future

"We gauge ourselves not by what is possible today, but by our vision of what can be achieved" – this has been our motto since the foundation of SensoPart in 1994. Our goal is to always be a step ahead and to be able to offer our customers the most innovative sensor for industrial automation.

With our easy to integrate VISOR® Vision sensors and our compact laser sensors with an amazing background suppression made in Germany, we stick up to this motto.

Get ready – we still have a lot of ideas for the future.

SENSOR TECHNOLOGY

Light barriers
Proximity switches
Laser sensors
Miniature sensors
Distance sensors
Colour sensors
Contrast sensors
Anti-collision sensors
Slot sensors
Fibre-optic amplifiers
Inductive sensors
Capacitive sensors
Ultrasonic sensors

VISION

Vision sensors
Smart cameras
Vision systems
Object detection
Object measurement
Colour detection
Code reading
Lighting
Lenses

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