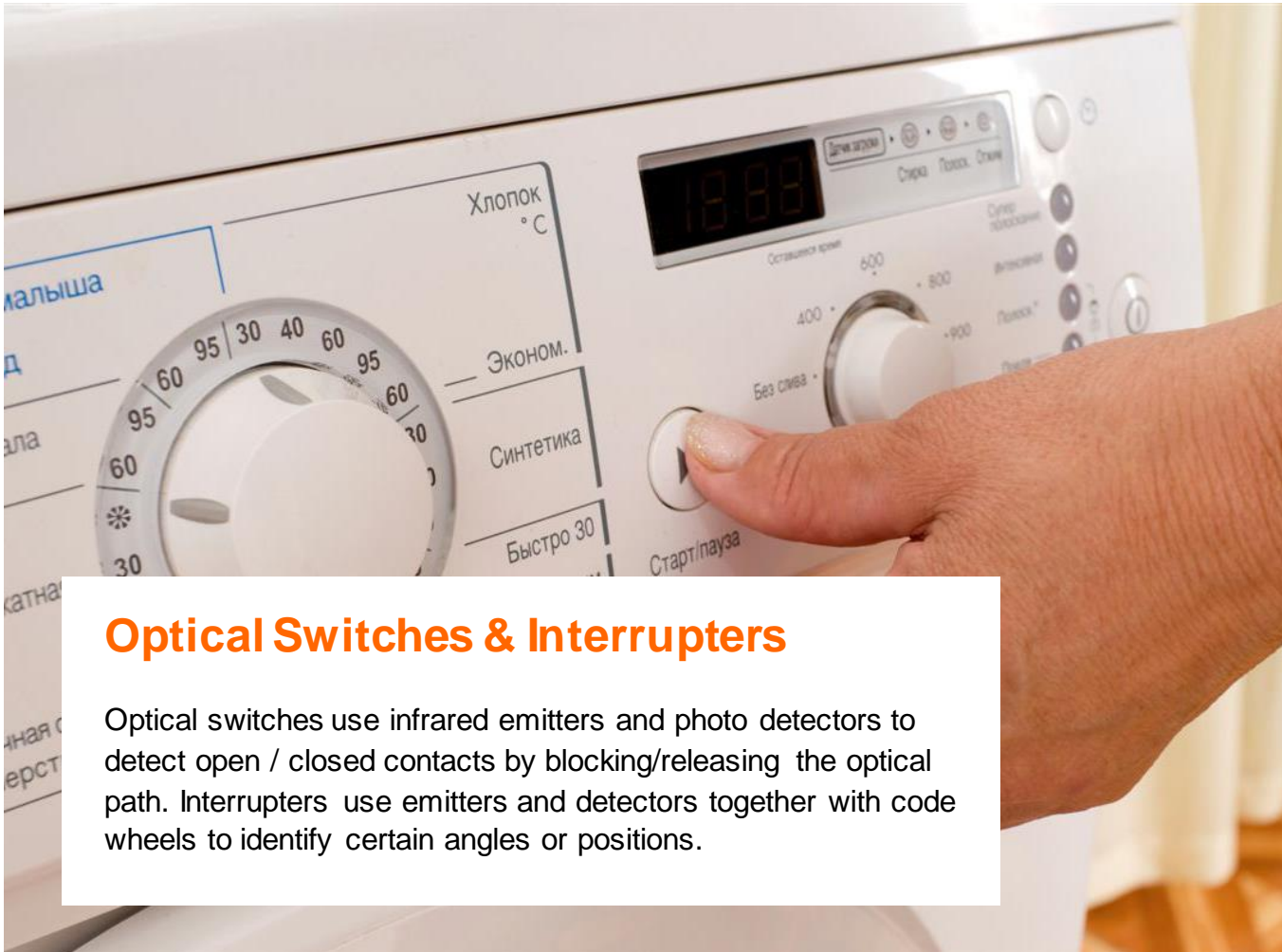


# Optical Switches and Interrupters

OS IR | JH | April 2016 | Regensburg  
Light is OSRAM

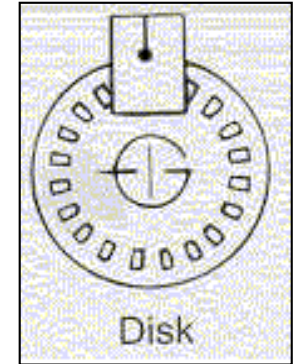
**OSRAM**  
Opto Semiconductors

# Optical Switches and Interrupters

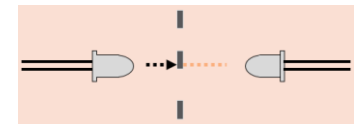


## Optical Switches & Interrupters

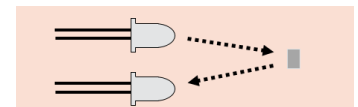
Optical switches use infrared emitters and photo detectors to detect open / closed contacts by blocking/releasing the optical path. Interrupters use emitters and detectors together with code wheels to identify certain angles or positions.



Interrupter



Transmissive Sensor



Reflective Sensor

# Recommended products – IR Emitter and Detector for Optical Switches

## Discrete solution



**Product:**  
Infrared emitter and photo transistor:  
SIDELED  
Micro SIDELED



**Type:**  
SFH 4255 + SFH 325 FA

## Integrated solution

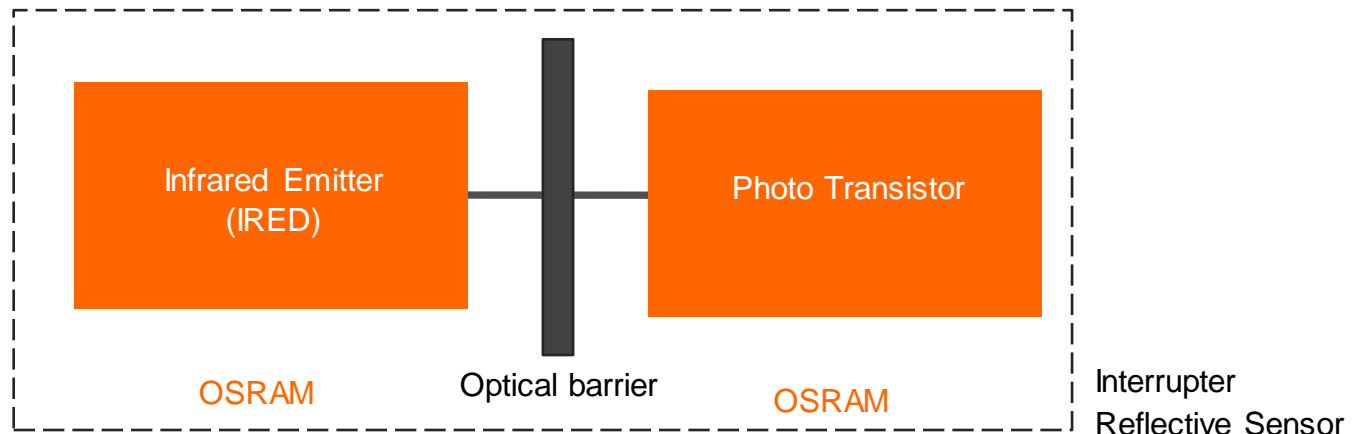


**Product:**  
Reflective Sensor  
**Type:**  
SFH 9206




**Product:**  
Interrupter  
**Type:**  
SFH 9540

## Building Blocks












# Recommended products – Benefits and more

Customer Benefit	Decision criteria	Tools
<p><b>Discrete Components</b></p> <ul style="list-style-type: none"><li>– Qualified according AEC Q101 automotive standards</li><li>– Various housing options</li><li>– Photo transistors with IR filters for daylight suppression</li></ul> <p><b>Interrupter</b></p> <ul style="list-style-type: none"><li>– Qualified according AEC Q101 automotive standards</li><li>– Daylight cut-off filter</li><li>– Emitter and detector electrically isolated</li><li>– Operating distance 1 – 5 mm</li></ul> <p><b>Reflective Sensor</b></p> <ul style="list-style-type: none"><li>– High sensing accuracy</li><li>– Wide gap between emitter and detector of 5 mm</li><li>– Daylight cut-off filter</li><li>– Suitable for surface mounting</li></ul> 	<p>→ Discrete components for highest flexibility to optimize performance by the optical design and specific components</p> <p>→ Reflective sensor and interrupters as a ready optical solution with compact size and good signal quality</p>	

# Optical Switches and Interrupters

## Products at a glance

Device	Part number	Centroid wavelength (nm)	Optical Flux (mW)	Radiant sensitive Area (mm <sup>2</sup> )	Spectral Range (nm)	AEC Q101 release for automotive	Dimensions (mm <sup>3</sup> )	
IRED SIDELED	<a href="#"><u>SFH 4244</u></a>	950	35			yes	4 x 3.6 x 4	
IRED SIDELED	<a href="#"><u>SFH 4255</u></a>	950	60			yes	4 x 3.6 x 4	
IRED SIDELED	<a href="#"><u>SFH 4256</u></a>	950	40			yes	4 x 3.6 x 4	
IRED Micro SIDELED	<a href="#"><u>SFH 4254</u></a>	950	40			yes	3 x 1.2 x 1	
Photo Transistor SIDELED	<a href="#"><u>SFH 325</u></a>			0.038	450 - 1120	yes	4 x 3.6 x 4	
Photo Transistor SIDELED	<a href="#"><u>SFH 325 FA</u></a>			0.038	750 - 1120	yes	4 x 3.6 x 4	
Photo Transistor Micro SIDELED	<a href="#"><u>SFH 3204</u></a>			0.04	450 - 1120	yes	3 x 1.2 x 1	
Reflective Sensor	<a href="#"><u>SFH 9206</u></a>					yes	6 x 4 x 1.9	
Slotted Interrupter	<a href="#"><u>SFH 9540</u></a>	950				no	15.6 x 6.8 x 10	

Recommended products, for further options please check [web site](#).