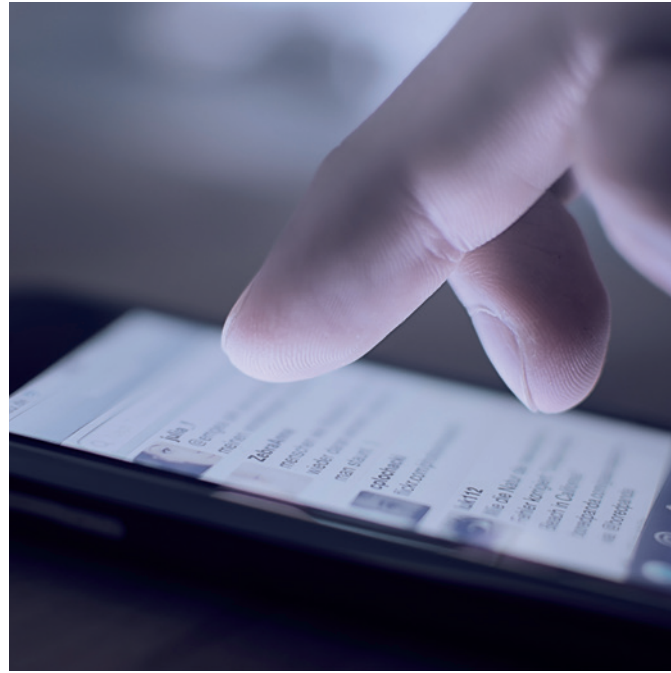


## Infrared – Small Emitters

### High performance for small spaces

You don't have to sacrifice high radiant intensity when your application has limited space. OSRAM Opto Semiconductors' infrared small emitters perform – even in the smallest area. These powerful infrared diodes are available in a wavelength of 850 nm, such as the low-profile narrow-beam Mini MIDLED®. They are ideal for use in light barriers, smart phones and optical touch screens.

**OSRAM**  
Opto Semiconductors



Touch screens



Proximity sensors



Light curtains



Gesture recognition

### Advantages

Different applications have different needs. OSRAM Opto Semiconductors provides suitable emitter solutions for all requirements. From standard CHIPLD or CHIPLD with lens to a reflector based package like Mini MIDLED® – we have it all. With different beam angles, the cutting-edge Thinfilm Chip Technology and a variant with Nanostack® Chip, the success of any application is guaranteed. Even black lenses are available for inconspicuous use.

### Features

**OSRAM Opto Semiconductors' infrared diodes distinguish themselves by these properties:**

- Very small SMT packages
- High optical output power
- Different narrow angles available:
  - Reflector based: +/- 17°
  - Clear lens: +/- 9° and +/- 40°
  - Black lens: +/- 10°, +/- 15° and +/- 22°
- Top- or sidelooper

### Applications

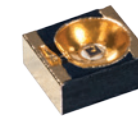
**Thanks to their features, OSRAM Opto Semiconductors' emitters are ideal for use in:**

- Mobile devices
- Proximity sensors
- Touch screens
- Sensor technologies
- Miniature photointerrupters
- Drive and control circuits
- Light curtains
- Light barriers

### Technical Data

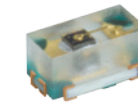
#### Mini MIDLED® SFH 4451

Footprint (W x L): 2.3 x 1.95 mm  
 Height: 0.9 mm  
 Half angle: +/- 17°  
 Wavelength: 850 nm  
 Radiant intensity: Typ. 60 mW/sr @ 100 mA  
 Total radiant flux: Typ. 55 mW @ 100 mA



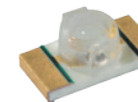
#### CHIPLD SFH 4053

Footprint (W x L): 1.0 x 0.5 mm  
 Height: 0.45 mm  
 Half angle: +/- 70°  
 Wavelength: 850 nm  
 Radiant intensity: Typ. 7 mW/sr @ 70 mA  
 Total radiant flux: Typ. 40 mW @ 70 mA



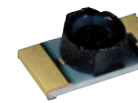
#### CHIPLD with lens SFH 4058

Footprint (W x L): 3.2 x 1.6 mm  
 Height: 1.1 mm  
 Half angle: +/- 40°  
 Wavelength: 850 nm  
 Radiant intensity: Typ. 18 mW/sr @ 70 mA  
 Total radiant flux: Typ. 40 mW @ 70 mA



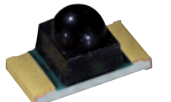
#### SFH 4056

Footprint (W x L): 3.2 x 1.6 mm  
 Height: 1 mm  
 Half angle: +/- 22°  
 Wavelength: 850 nm  
 Radiant intensity: Typ. 35 mW/sr @ 70 mA  
 Total radiant flux: Typ. 40 mW @ 70 mA



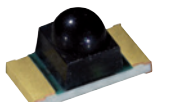
#### SFH 4059

Footprint (W x L): 3.2 x 1.6 mm  
 Height: 1.85 mm  
 Half angle: +/- 10°  
 Wavelength: 850 nm  
 Radiant intensity: Typ. 100 mW/sr @ 70 mA  
 Total radiant flux: Typ. 40 mW @ 70 mA



#### SFH 4059S

Footprint (W x L): 3.2 x 1.6 mm  
 Height: 1.85 mm  
 Half angle: +/- 15°  
 Wavelength: 850 nm  
 Radiant intensity: Typ. 130 mW/sr @ 70 mA  
 Total radiant flux: Typ. 70 mW @ 70 mA



#### SFH 4045

Footprint (W x L): 3.2 x 2.51 mm  
 Height: 1.6 mm  
 Half angle: +/- 9°  
 Wavelength: 940 nm  
 Radiant intensity: Typ. 90 mW/sr @ 70 mA  
 Total radiant flux: Typ. 40 mW @ 70 mA





**Infrared – Small Emitters on the Internet:**  
[www.osram-os.com/ir-small-emitters](http://www.osram-os.com/ir-small-emitters)

For further information on the available products please visit our product catalog at <http://catalog.osram-os.com>

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