

### General description

General purpose optical IR bandpass filter at centre wavelength of 860nm. It is deposited on thin glass carrier.

The filter is designed as a single peak window filter for the wavelength range of 300 - 1'050nm. It is well adapted for applications with high power LED of 850nm (e.g. OSRAM SFH 4059).

### Features

- Optimized for high power LED 850nm
- Single peak window filter bandpass 860nm
- Specified wave range 300 – 1'050nm
- Thin glass substrate
- Standard size
- Customer size on request
- Packaged in tape-on-reel for easy automatic assembly

### Applications

- NIR sensor and camera
- TOF sensor and camera
- Light barrier

### Optical data

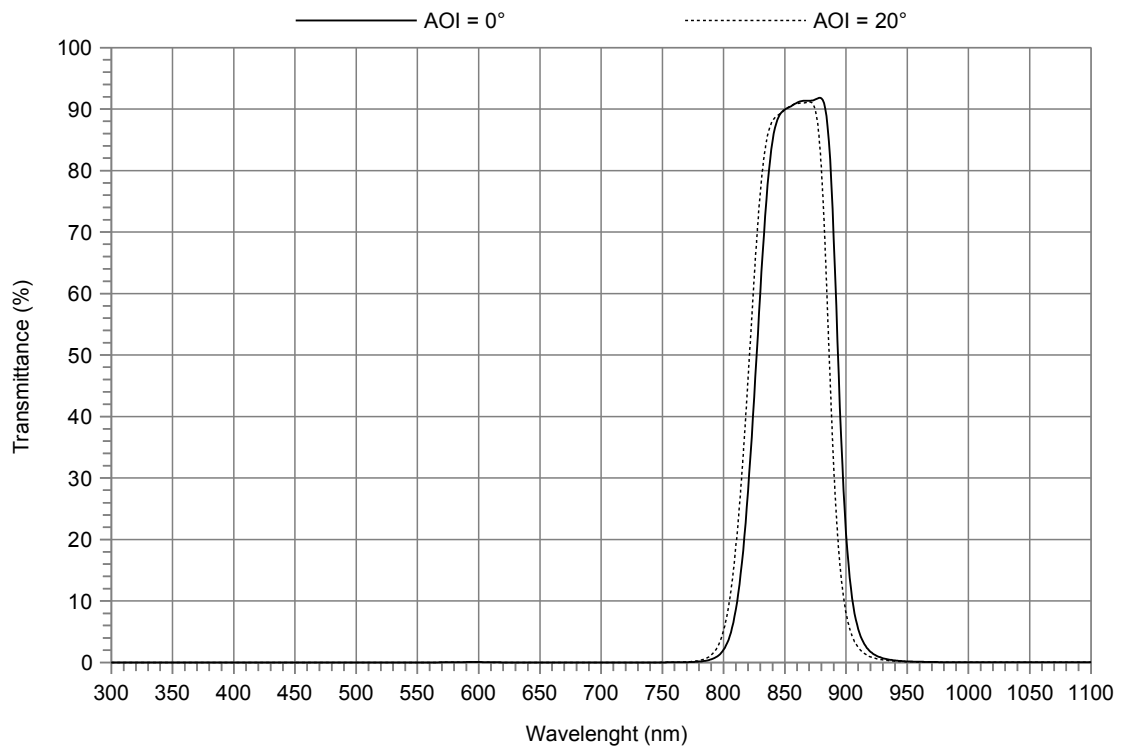


Figure 1: Transmittance spectrum

## Optical data (cont.)

Symbol	Parameter	Conditions / comments	Min.	Typ.	Max.	Units
AOI	Angle of incident	Random polarized	0			deg
CWL <sub>(45%)</sub>	Centre wavelength	@ 45% transmittance	860 ±6			nm
FWHM <sub>(45%)</sub>	Full width at half maximum	@ 45% transmittance	65 ±10			nm
T <sub>avg</sub>	Transmittance	@ 300 nm - 800 nm	≤ 0.1			%
T <sub>avg</sub>	Transmittance	@ 845 nm - 875 nm	> 80			%
T <sub>abs</sub>	Transmittance	@ 860 ±6 nm	> 80			%
T <sub>avg</sub>	Transmittance	@ 950nm - 1'050nm	≤ 0.1			%
AOI	Angle of incident	Random polarized	0 - 20			deg
SS	Spectral shift		< 15			nm

## Mechanical data (all measures in mm, )

Symbol	Parameter	Conditions / comments	Min.	Typ.	Max.	Units
	Glass		D263T ECO or equiv.			
	Length	according order information	L.L ±0.10			mm
	Width	according order information	W.W ±0.10			mm
	Thickness		0.30 ±0.05			mm
	Operating ambient temperature		-40		+85	deg C
	Relative humidity	not condensing	+5		+95	%

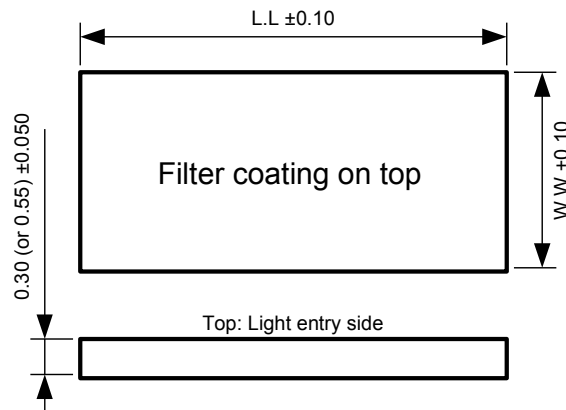


Figure 2: Mechanical dimensions (generic drawing)

## Dimensions and ordering information

Part number	Type	Size	RoHS compliance	Packaging
P100 525	epc-bp860-2.0 x 2.0 x 0.3mm	1.9 x 1.9 x 0.30 mm	Yes	Reel
P100 526	epc-bp860-5.0 x 4.0 x 0.3mm	4.9 x 3.9 x 0.30 mm	Yes	Reel
P100 527	epc-bp860-8.0 x 8.0 x 0.3mm	7.9 x 7.9 x 0.30 mm	Yes	Reel

Note: Other dimensions, ordered in volumes, are available on request.

Former parts. - Not for new product developments:

Part number	Type	Size	RoHS compliance	Packaging
P100 147	epc-bp860-2.0x2.0	1.9 x 1.9 x 0.55 mm	Yes	Reel
P100 268	epc-bp860-5.0x4.0	4.9 x 3.9 x 0.55 mm	Yes	Reel
P100 088	epc-bp860-6.0x2.8	5.9 x 2.7 x 0.55 mm	Yes	Reel
P100 267	epc-bp860-8.0x8.0	7.9 x 7.9 x 0.55 mm	Yes	Reel

## Packaging information (all dimensions in mm, )

### Tape & reel information

The devices are packaged into embossed tapes for automatic placement systems. The tape is wound on 178mm (7 inch) reels and individually packaged for shipment. General tape-and-reel specification data are available in a separate datasheet and indicate the tape size for various package types. Further tape-and-reel specifications can be found in the Electronic Industries Association EIA-Standard 481-1, 481-2, 481-3.

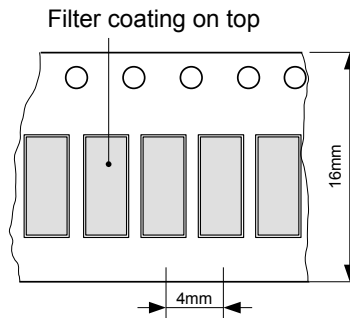


Figure 3: Tape dimensions (generic drawing).  
Parts are placed with filter coating on top side

Reel type	Tape size	Pieces / reel	Packaging method
7 inch	16 mm	1'000 pcs	- Aluminium bag with vapor barrier - Protective N <sub>2</sub> -atmosphere

ESPROS does not guarantee that there are no empty cavities in the tape. The pick-and-place machine should check for the presence of a chip during picking.

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