



CD850F165 – wide-spectrum, high-power SLD-based light source modules at 850 nm

Description

CD850F165 light source modules are compact broadband light sources combining the radiation of three broadband superluminescent diodes (SLDs) with slightly shifted emission spectra to obtain a spectrum width at -3 dB (half intensity) of more than 155 nm. Two models are available, with and without a built-in optical isolator, the latter is recommended for applications where optical feedback does not exceed -27 dB.



Features

- Output power 12 mW
- Spectrum width > 155 nm (3dB)
- Low RIN, < -130 dB/Hz
- Compact design
- Modules with and without optical isolation of the optical output
- 12 V/2A DC supply
- USB control, TTL on/off
- Easy integration to users' equipment
- Up to 50 kHz on/off modulation of the optical output (upon request)

Applications

- High resolution OCT
- Spectroscopy and low coherence interferometry
- Optical testing

General specifications

Parameter	Units	CD850F165P15S	CDI850F165P11S
Center wavelength	nm	850 ± 10	850 ± 10
Spectrum width (3 dB)	nm	165 ± 10	165 ± 10
Residual Fabry-Perot ripple	%	< 5 (0.5 typ.)	< 5 (0.5 typ.)
Fiber output power, min./typ.	mW	15 ± 3	11 ± 3
Spectral flatness	%	< 50%	< 50%
Optical isolation at 850 nm	dB	-	-30
Optical isolation within 3 dB BW	dB	-	Better than -20
RIN, 10 kHz to 2 MHz	dB/Hz	< -130	< -130
Long-term power stability*	%	0.3	1.0
Optical power drift, typical	ppm/°C	250	3000 (depends on isolator)
Type of fiber		Corning Hi 780	Corning Hi 780
Fiber connector		FC/APC, narrow key	
Control interface		USB, TTL on/off	

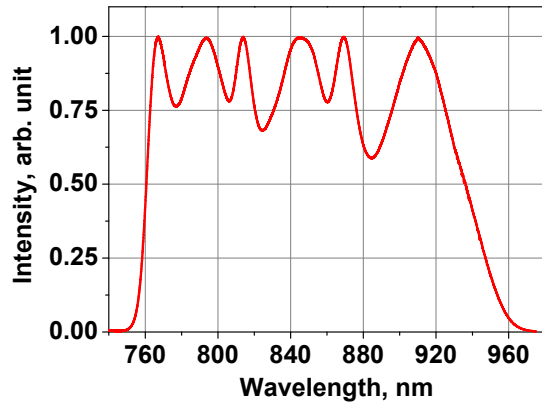
* Measured long-term power stability of a light source module over 8 hours at an ambient temperature of 25±1 °C with free air circulation (after 20 minutes of warming-up).

Electrical, Mechanical, Environmental and Other Specifications

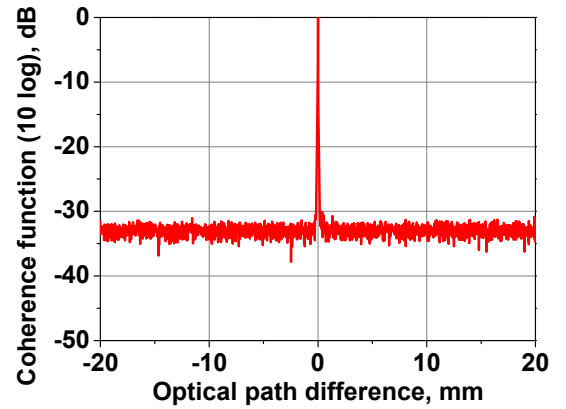
Parameter	Units	CD850F165P15S	CDI850F165P11S
DC Supply	V/A	12/2	
Operating temperature	°C	0...+40 (non-condensing)	
Storage Temperature	°C	-20...+75	
Humidity	%	< 90	
Dimensions	mm	190 × 110 × 31	
Weight	kg	0.8	1.1

Typical performance examples

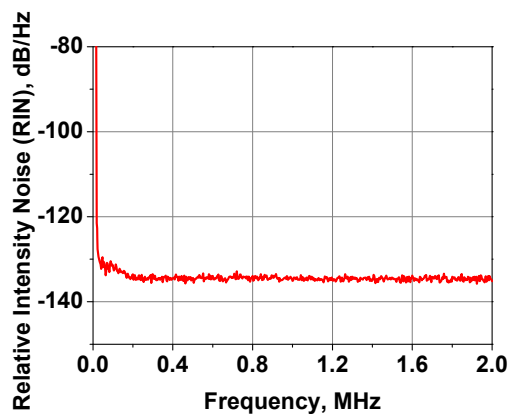
CD850F165 - Optical Spectrum



CD850F165 - Coherence Function



CD850F165 - RIN



CD850F165P15S - Stability over the Range 0...+40 °C

