Light is Vision.

LED Light Source

IntraLED 2020

Part Number 17185.000/17185.100

Instruction Manual

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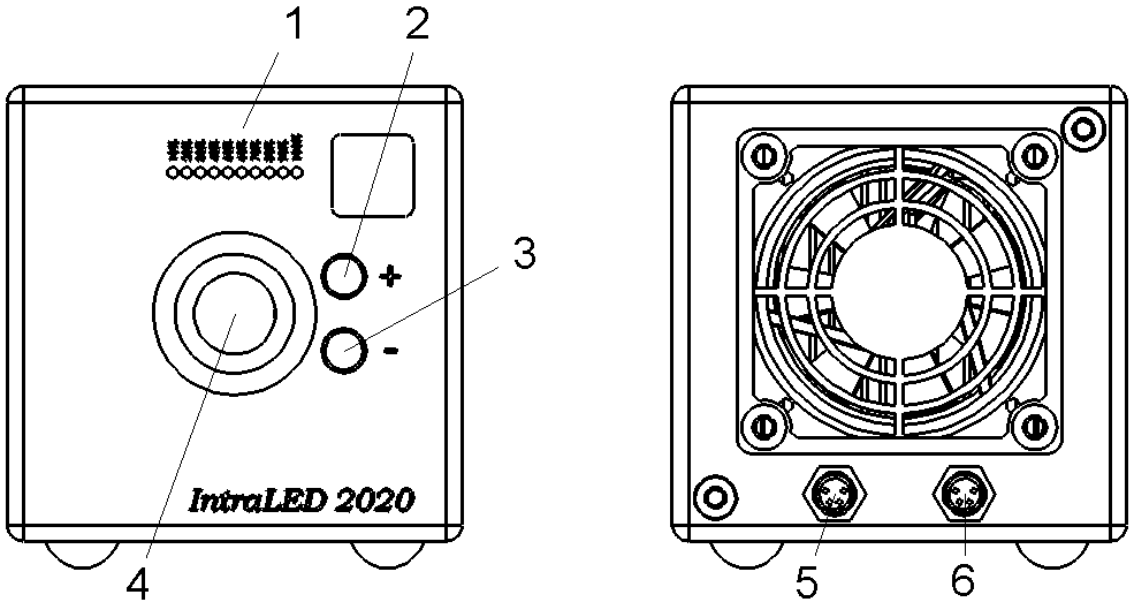
Fiber Optics | Optics | Opto-Electronics | Engineering

1/13/2011, Rev. A

P/N 17185.780

Overview



1	Power indicator
2	Increase brightness
3	Decrease brightness
4	Ø15mm connector
5	Power connector
6	RS232 connector

Contents:

Light Source IntraLED 2020
Power supply
RS232 cable
Instruction manual

Note:

The light source contains no user-serviceable parts.

The light source should be opened only by technically qualified persons.

Clean the light source with a moist cloth after disconnecting the power supply.

Do not allow any fluids to penetrate inside the housing.

The air intake in the rear wall and the air exhaust in the ventilation slots in the bottom of the housing must remain unobstructed.

Do not operate the light source at a voltage greater than 12V.

Startup

- Connect the power supply included with the unit with the power connector (5).
- Connect the RS232 cable included with the unit with the light source (6) and the computer.
- Plug in the power supply.

2. Operation

When the power supply is plugged in, the two control buttons (2) and (3) light up blue. The button (2) can be used to increase the current flowing through the LED in increments of 5%. The button (3) can be used to reduce the current flowing through the LED in increments of 5%. Increasing the current by one increment at 100% brightness returns the brightness to 0%. This can be used to turn the light source off quickly. Decreasing the current by one increment at 0% brightness returns the brightness to 100%. This can be used to turn the light source on quickly.

3. Display

The display provides information on the brightness selected:

No display for 0% and 5%

●○○○○○○○○○ 10%

●●○○○○○○○○ 15%

○●○○○○○○○○ 20%

○●●○○○○○○○ 25%

○○○○○○○○●● 95%

○○○○○○○○○● 100%

4. Serial interface

Setting the serial interface:

Bits/s	9600
Data bits	8
Parity	none
Stop bits	1
Flow control	none

The light source responds to only three commands, all of which end in the Enter key (ASCII Code 13):

v(+Enter)
Firmware version number

r(+Enter)
Reads the status of the light source. The parameters intensity, current and voltage through the LED and the temperature of the LED are read.

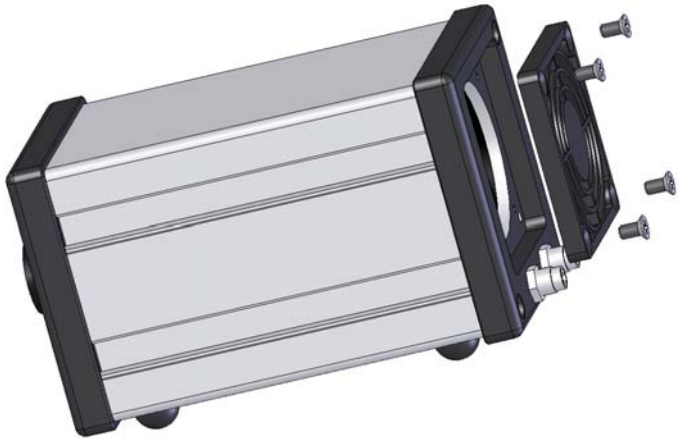
The accuracy of current and voltage is approximately ±2%, and of temperature approximately ±10%.

iXXX(+Enter)
Sets the intensity in %. XXX lies in the range [0..100]. Rounded to the next 5% without feedback. If XXX is entered as greater than 100, the light source reports “Error”. The light value is not changed. Leading zeroes do not have to be entered.

Example: r
Int=100
i=594mA
U=17.7V
Temp=27.0
i80
OK
i120
ERROR

5. Cleaning/Replacement of the Fan Filter

Unscrew the four M4 screws. Lift off the plastic grate.



The dirt can be blown out with compressed air. Extremely dirty filters can be replaced with a replacement filter from VOLPI, Item No. 2563.01/pkg 4.

6. Troubleshooting

Problem	Possible Cause	Solution
No light, no fan noise, (+) and (-) buttons do not light	No or insufficient power supply	Check connector plugs, replace power supply if necessary
No light, no display, fan noise present, (+) and (-) buttons are lit	Light source turned off (Intensity 0%)	Press (+) key
No light, flashing display	Light source overheated	Unplug light source and let cool. Check fan and air filter. Plug light source back in.
No light, flashing display	Defective LED	Replace LED (qualified technical personnel only)
Light flickers once a second	Inadequate power supply	Power supply must deliver 12V DC, 1.3A

No connection via RS232	No connection	Check power connector
No connection via RS232	Incorrect COM port, incorrect settings	See Chapter 4 for setting
No connection via RS232	COM port is insufficiently supported or blocked by the operating system	A USB downstream of the RS232 converter works in all cases
Other problems		Please contact: volpi@volpiusa.com

7. Technical Data

Part Number: 17185.000/17185.100

Power supply:
12VDC max. 15W

Ambient temperature:
0°C – 40°C (Operation)
-25°C – 50°C (Storage)

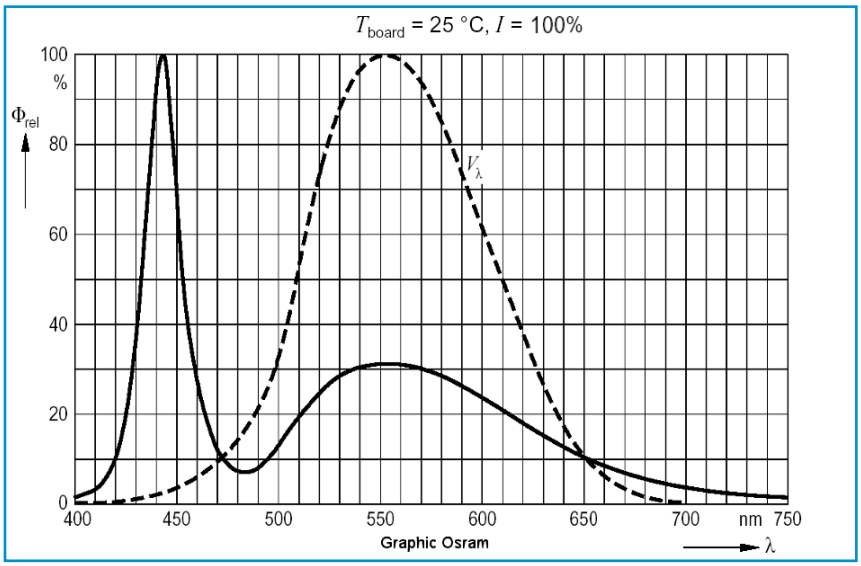
Relative humidity:
5% – 95% (excl. condensation)

Dimensions (mm):
89 x 84 x 159 (H x W x D)
Weight: 1.1 kg

Fan noise: 39dB(A)

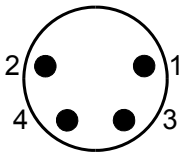
Illuminance:
5.6Mlux at Exit ∅ = 10mm (optical fiber output)
Half-aperture angle: 10°
Color temperature: Typ. 6500K

Spectrum



Pin assignment:

Power supply:



1 12VDC
2 GND

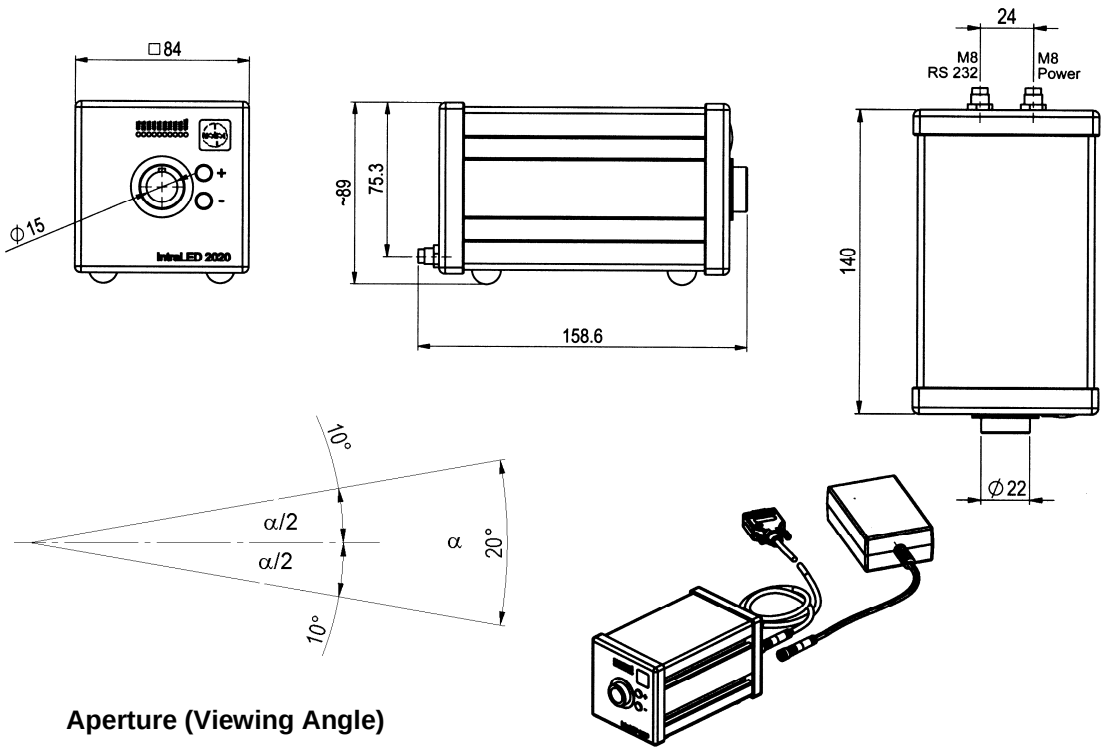
RS232:

2 GND
3 Tx *
4 Rx *

* Tx: Data from light source to PC
* Rx: Data from PC to light source

LED life:

(Brightness drops to 50% of initial brightness). >50,000h



Aperture (Viewing Angle)

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