SMETec
A Kistler Group Company

High Intensity Fiber Optic Light Sources

for High Speed Imaging Illumination

Type LED-P40 ;LED-P80; LED-P160

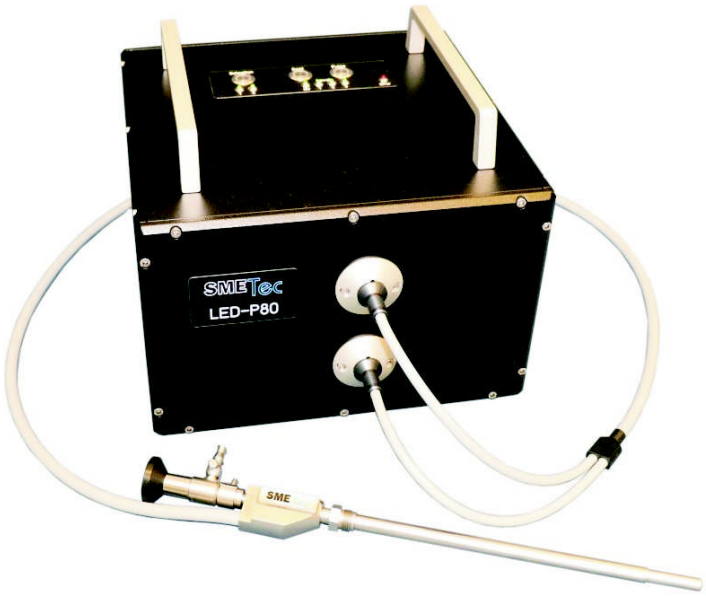
The SMETEC LED-P40/80/160 is a high performance LED light source family for industrial use. It was developed for light critical camera applications especially for high speed imaging. The LED-P40/80/160 can be used as a continuous light source or pulsed source of light. It provides in both applications high light output and in pulse mode high repetition rate.

With a connected optical fiber bundle, the system is an ideal choice for many applications in endoscopy and spot illumination which demand a higher light output. It is possible to substitute laser applications. This makes the handling much more easier and safer. Further there are no more extra safty features necessary. The user can chose between 3 kind of light sources, which differed by the amount of LED chips.

LED-P40 has 1 LED chip
LED-P80 has 2 LED chips
LED-P160 has 4 LED chips

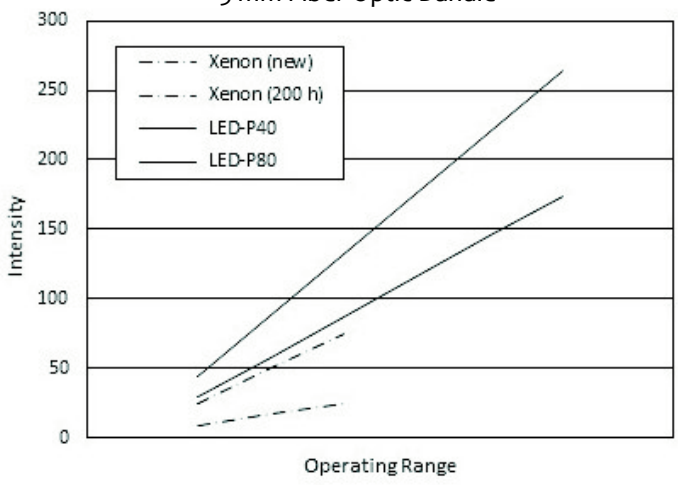
The light source can be used as stand alone system, or with remote control over an Ethernet connection.

All units are equipped with a T-Base 100 (Ethernet) connector for the external mode adjustment. Settings can be saved and will be available after restart. Many settings can also be controlled manually at the device. The current mode is displayed by status LEDs.
The LED-P40/80/160 is the ideal illumination system for the SMETEC All-In-One probe. Minimally invasive measuring techniques use only one optical probe with separated illumination and recording channels. This system prevents interfering reflections.

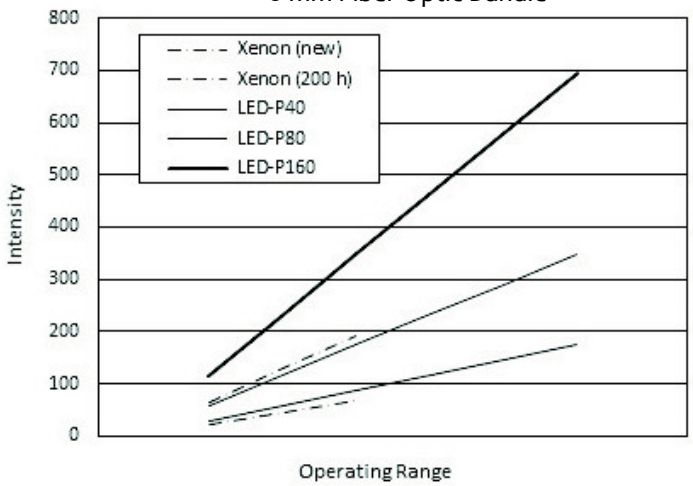


LED-P80 with customized Borescope and Optical Probe

Comparision Xenon Light vs. LED-P40/80
5 mm Fiber Optic Bundle



Comparision Xenon Light vs. LED-P40/80/160
8 mm Fiber Optic Bundle



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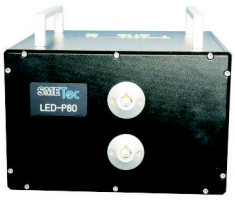
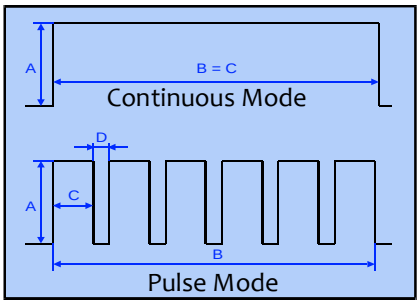
General Technical Data for LED-P40/80/160

- Lamp type: LED - green or white
- Modes: pulsed / continuous / single shot
- Pulsed Modes: Timed / Gated
- min. Pulse length: 10 µs
- max. Pulse length: 1000 µs
- Active light guide diameter: 3,5 mm
- Optical mounting: Schölly/Volpi other on demand
- Interface: Ethernet, BNC I/O for Trigger
- Operating voltage: 100-240 VAC; 50/60 Hz
- Approvals: in compliance with CE regulations

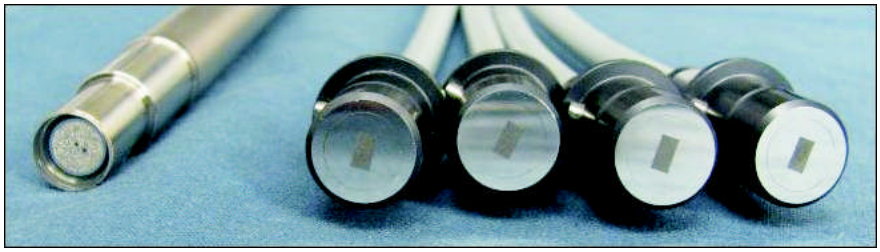


Technical Data	LED-P40	LED-P80	LED-P160
• Optical accesses	1	2	4
• Luminous flux (continious and pulse mode)	9000 lm	18000 lm	36000 lm
(pulse mode max. 20 µs for 10 ms)	15000 lm	30000 lm	60000 lm
(Single shot max. 20 µs)	18000 lm	36000 lm	72000 lm
• Max. lamp power	350 VA	850 VA	1400 VA
• Dimensions (mm x mm x mm)	260 x 175 x 180	275 x 290 x 225	327 x 305 x 340
• Weight	6.6 kg	9.8 kg	19.8 kg

Illumination Modi



Mode	A Luminous Flux LED-P40	B max. Duration	C Pulse Duration	D Off Time between Pulses
Continuous	7000 lm	not limited	---	---
Continuous Boost	9000 lm	30 sec	---	---
Pulse	9000 lm	not limited	10 µs - 1 ms	0,4 x C
Pulse Boost	15000 lm	10 ms	10 - 20 µs	10 x C
Pulse Ultra Boost	18000 lm	---	10 - 20 µs	1 s



Customized Fiber Optic Bundle with 4 Rectangled Front Ends

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