SpecBright™ LED Linelights

EXTREMELY BRIGHT LED ILLUMINATION DESIGNED WITH VISION IN MIND

FEATURES

- Extremely bright, compact, and reliable
- Chip-on-board technology
- Superior uniformity
- Stackable to any length
- Seamless integration and mounting
- UV, visible, near-IR and white

APPLICATIONS

- Linescan illumination
- Linear backlight illumination
- Linear flood lighting

ACCESSORIES

- Power supplies
- Current mode drivers
- Heat sinks
- Strobe drivers

StockerYale SpecBright™ LED Linelights are the brightest LED illuminators in their class. Based on our patented chip-on-board technology, these modules are manufactured with a high LED packing density and excellent thermal management.

Compared to illuminators fabricated with T-Packs or other individually packaged LEDs, StockerYale SpecBright™ LED Linelights offer several times the brightness, for modules of comparable size. The illuminators combine up to 100 individually mounted LED chips with a single, high-quality aspherically corrected fresnel lens to produce a brilliant line of light of exceptional uniformity. In addition, our linelights are stackable, enabling users to create a continuous line of any length.

These high performance units are ideal for OEMs, system integrators and end users who require energy efficient, long lasting illumination sources for their sophisticated applications.

The illuminators are available in a wide range of wavelengths, as well as white. They can be operated in continuous (CW) or pulsed mode. A **backlight configuration** is also available where the standard lens is replaced with a diffuser.

Custom-engineered LED solutions are also available to meet specific optical or mechanical requirements.

StockerYale

Spectral Characteristics[1]

Color	Blue	Red	IR	White
Peak wavelength / color temperature	470 ± 10 nm	630 ± 10 nm	740 ± 10 nm	6700 K
Spectral width FWHM (nm)	30	30	30	NA

Illumination Characteristics[2,3]

Line length FWHM at working distance of 100 mm (mm)	80	80	80	80
Line width FWHM at 100 mm (mm)	5	5	5	10
Typical irradiance at 100 mm (W/m^2)	15	40	40	NA
Typical illuminance at 100 mm (lux)	1,000	7,000	NA	10,000

Electrical characteristics, lifetime & environment[4]

Voltage mode (code "V")				
Operating current (mA) at 24 V	200	200	200	160
Current mode (code "I")				
Maximum operating current (mA)	400	400	400	240
Mean time before failure (MTBF)	100,000	100,000	100,000	100,000

1 375, 395 and 870 nm also available. Please contact us for details.

2 Irradiance and illuminance measured at the center of the illumination field using a 4 mm diameter detector.

3 See Figures 3 and 4 for graphs of FWHM line width and line length, as a function of working distance (wd).

4 Case temperature should not exceed 45°C. Please consult StockerYale for details on lifetime measurements.

Illumination Characteristics

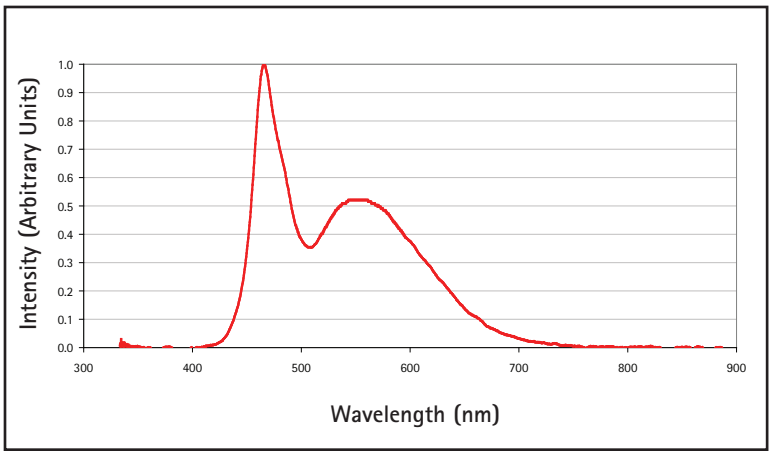


Figure 1 - Typical spectral distribution of a white LED linelight (LF1-000).

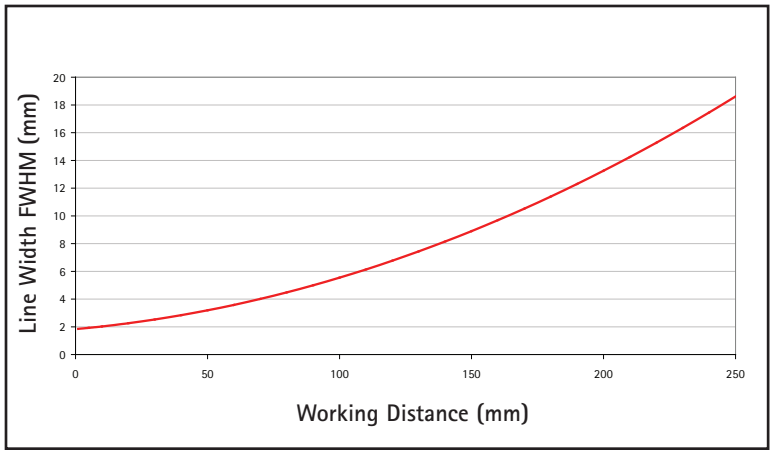


Figure 2 - Line width vs. working distance for LF1-630.

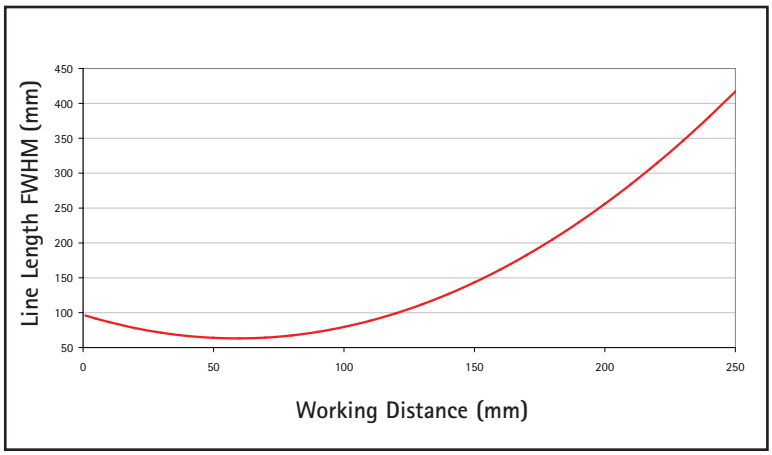


Figure 3 - Line length vs. working distance for LF1-630.

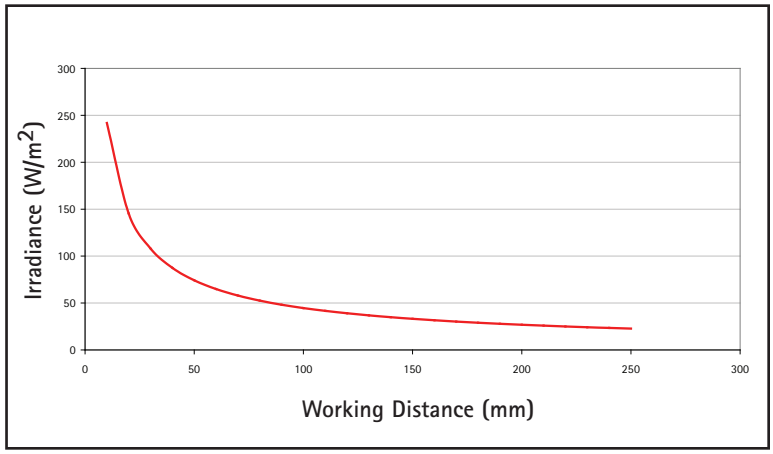


Figure 4 - Irradiance vs. working distance for LF1-630.

Note: All measurements were made in continuous (CW) mode.

Product Part Numbers

Product Code	Frontlight or Backlight	Series	–	Wavelength	–	Voltage or Current Source	Without or with Heat Sink	Connector or Flying Leads	Cable Length (in cm)
L	F or B	1		470 630 740 000 (white)		V or I	X or H	C or F	100 (standard)

Example: LF1-630-VXC100. Refer to website for complete part number matrix.
Please contact us for other wavelengths.

Connectors / Flying Leads

- Mini Universal Mate-N-Lok connectors are standard for voltage source (V) modules. They provide a secure locking mechanism and reverse polarity protection. Voltage source (V) modules can also be manufactured with flying leads.
- Flying leads are standard for current source (I) modules.

Power Supplies

- 24 V wall plug-top power supply for voltage source (V) modules.
- Current mode driver and power supply for current source (I) modules.

Please visit our website for specifications and ordering information.

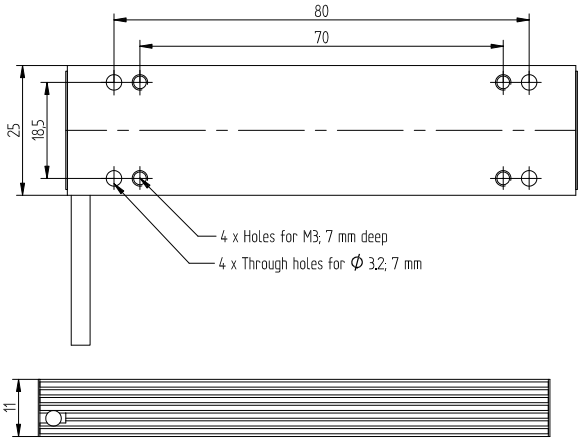
Strobe Drivers

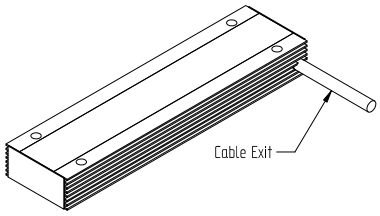
Due to the thermally optimized design, peak optical powers up to 50 times the CW optical power can be obtained using pulsing. Contact us for more details.

Heat Sinks

For best operation, the housing temperature should not exceed 45°C. StockerYale provides optimized heat sinks for use with our LED linelights. *Please visit our website for dimensional diagrams.*

Dimensional Diagrams





All dimensions in [mm]

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