

1.0" (25mm) Monochrome Color Ultra-Bright



Parameter	Characteristics (dimensions in mm)		
	UB1010M-R	UB1010M-G	UB1010M-B
Aperture Size (± 0.25)	20.00 x 15.00	20.00 x 15.00	20.00 x 15.00
Aperture (Diagonal)	25.00	25.00	25.00
Body Dimensions	32.00 x 27.00	32.00 x 27.00	32.00 x 27.00
Height	20.00	20.00	20.00
Weight w/12" Wire (grams)	14	14	14
Angular Radiation	$\pm 7^\circ$ FWHM	$\pm 7^\circ$ FWHM	$\pm 7^\circ$ FWHM
Operating Temperature	-55° to +70°C	-55° to +70°C	-55° to +70°C

Teledyne's Ultra-Bright Collimated LED Illuminators (UCLI) employ large power chip LEDs (typically 1 mm x 1 mm) together with proprietary optical lensing to produce extremely bright and uniform illuminators for applications such as reflective and transmissive LCDs, light mediated biomedical procedures, automotive and general illumination accent lighting. High optical efficiencies on the order of 85% are obtained with uniformities typically of $\pm 3\%$.

Ultra-Bright Illuminators operate over a wide temperature range, are relatively immune to vibration and mechanical shock, making them an ideal choice for today's energy efficient lighting products.

Design Implementation Advantages

- Compact, rugged, lightweight
- Fast response < 100 ns on/off address
- Long life span
- Low voltage; power efficient operation
- 15,000:1 dynamic full range dimming
- High optical efficiency
- Eliminates DC-AC inverter/power supply
- No warm-up and no over voltage start
- High reliability

Parameters (Steady State DC) Ta = 25°C	UB1010M-R	UB1010M-G	UB1010M-B
Minimum Luminance (fL)	150,000	225,000	60,000
Hue (λ nm) (± 5 nm)	625	525	470
Uniformity (Full Aperture)	1.6:1		
Maximum Power (mW)	875	1225	1225
Drive (VDC) ($\pm .5$ V)	2.5	3.5	3.5
Maximum Current (mA)*	350	350	350
Projected Life (Hours)**	≥ 40 K	≥ 20 K	≥ 20 K

* Requires additional heat-sinking

**Additional derating required for elevated temperatures

SPECIFICATIONS ARE SUBJECT TO CHANGE AT ANY TIME WITHOUT NOTICE

Teledyne's Ultra-Bright Collimated LED Illuminators are fully patent protected under patent #5,577,493 with other patents pending.

For more information, please visit our website at www.teledynelighting.com

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