

.25" (7.47mm) Monochrome & RGB Illuminators



Parameter	Characteristics (dimensions in mm) AL0252M, C
Aperture Size ($\pm .25$)	6.10 x 4.32
Aperture (Diagonal)	7.47
Body Dimensions	15.42 x 11.30
Height	5.08
Weight with Wire (grams)	2 \pm .5 grams
Angular Radiation	$\pm 23^\circ$ FWHM
Operating Temperature	-20° to +85°C

The ALPHALIGHT™ LED Illuminators provide exceptional high performance uniform light, ideal for non-emissive displays. Bright, highly uniform light is achieved through a unique solid state design using Teledyne's patented and proprietary technology. High optical efficiencies significantly optimize LCD and Spatial Light Modulator (SLM) display performance with lower power consumption.

ALPHALIGHT™ RGB (Full color) LED Illuminators are ideal for color field sequential lighting (CFSL) of non-emissive displays.

The ALPHALIGHT™ is capable of operating in wide temperature ranges and is immune to most vibration and mechanical shock.

The ALPHALIGHT™ LED Illuminators are offered in the Teledyne standard catalog, with custom options available including IR and NVIS.

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	AL0252M				AL0252C
	-W	-R	-G	-B	
Minimum Luminance (fL)	4000	7900	8800	1800	12800 (EEW: x = .33, y = .33)
Hue (λ nm) (± 5 nm)	Color (± 0.02) x = .31-.35 y = .31-.35	625	525	470	Color (± 0.02) RED: x = .67-.73, y = .27-.33 GREEN: x = .14-.28, y = .67-.74 BLUE: x = .11-.15, y = .04-.10
Uniformity (Full Aperture)	$\leq 1.3:1$				$\leq 1.3:1$
Maximum Power (mW)	105	100	105	105	310
Drive (VDC) ($\pm .5$ V)	3.5	2.5	3.5	3.5	RED = 2.5, GREEN = 3.5, BLUE = 3.5
Maximum Current (mA)	30	40	30	30	RED = 40, GREEN = 30, BLUE = 30
Projected Life (Hours)*	≥ 20 K	≥ 40 K	≥ 20 K	≥ 20 K	≥ 20 K

*Additional derating required for elevated temperatures

Teledyne's ALPHALIGHT™ product is fully patent protected (U.S. Patents #5,440,197, #5,684,354, #5,892,325, #6,043,591 domestically as well as foreign additional patents pending) for this specific application.

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