

## 2.0" (50.8mm) Monochromatic/White LED Illuminator



Parameter	Characteristics (dimensions in mm)
Aperture Size ( $\pm .25$ )	39.00 x 31.00
Aperture (Diagonal)	50.8
Body Dimensions	47.00 x 39.40
Height	6.9
Weight (grams)	14 $\pm$ 2 grams
Angular Radiation	$\pm 23^\circ$ FWHM
Operating Temperature	-40° 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.

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	AL2020M-R	AL2020M-G	AL2020M-B	AL2020M-W
Minimum Luminance (fL)	5000	4000	700	3000
Hue ( $\lambda$ nm) ( $\pm$ 5nm)	625	525	470	Color ( $\pm 0.02$ ): x = .31-.35, y = .31-.35
Uniformity (Full Aperture)	1.4:1			
Maximum Power (mW)	1600	1680	1680	1680
Drive (VDC) ( $\pm .5V$ )	2.5	3.5	3.5	3.5
Maximum Current (mA)	640	480	480	480
Projected Life (Hours)*	40K	20K	20K	20K

\*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](http://www.teledynelighting.com)