Arcturus Datasheet

Overview

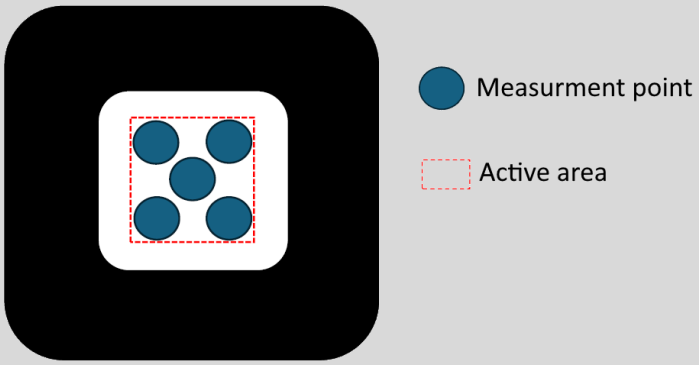
Name	Arcturus
Function	Arcturus is a temperature-stabilized, DC-controlled, dimmable light source with versatile flicker functionality. It is used to characterize sensors and camera systems.
Features	• Temperature-stabilized and dimmable light source • Very high luminance for testing sensors near saturation • Versatile flicker functionality for realistic tests • In use with Lightcube-Controller

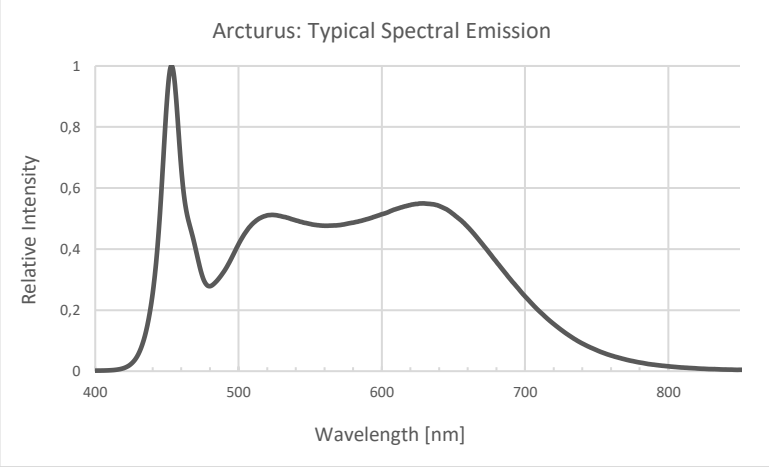
General Description

Power Supply/Consumption	12 V_{DC}, 55 W
Ports	• DC Power connection • 2 x CAN – Ports
Dimensions (depth x width x height)	120 mm x 120 mm x 130 mm
Device weight	1.2 kg
Ambient temperature	18 - 28 °C
Scope of delivery	• 1 x Arcturus light source • 1 x CAN-Cable • 1 x DC Power cable • 1 x Acceptance protocol • 1x Arcturus light source operating instructions • 1x 20 × 20 mm light mask
Lifespan	10,000 h

Optical characteristics

Light source

Light source	36 temperature-controlled LEDs based on iQ-DC technology Opening 30 x 30 mm
Active area	20 mm x 20 mm
Uniformity (active area)	> 95% at 100% power output > 94% at 10% power output > 90% at 1% power output > 90% at 0.1% power output
Uniformity measurment positions	
Illumination stability after startup time	± 0.5%
Correlated Color Temperature (CCT)	4900 K (± 200 K)
Color Rendering Index (CRI)	> 95
Response time (switch illuminant) *	0.5 s (typical)
Minimum luminance	≤ 2 cd/m^2
Maximum luminance	≥ 1,000,000 cd/m²
Startup time (time until the operating temperature is reached)	120 s
Flickering Modes:	• Square (LED-Flicker) • Sine • Triangle
Flicker modes	1 – 1000 Hz (Square) 10 – 500 Hz (Sine / Triangle)
Duty cycle	1 – 99% (Square)
Dim function	10^6 - 10 Steps
Flicker frequency step width	0.1 Hz (1 – 200 Hz) 0.2 Hz (200 – 500 Hz) 0.5 Hz (500 – 1000 Hz)
Relative inaccuracy of the referenced internal luminance sensor	If L > 2 cd/m² ±5% If L < 0.5 cd/m² > +5% / < -5%

Typical spectral emission	

Software functions

Software	Vega Software
Requirements	Lightcube Controller PC with Windows 10 (or higher) USB port (2.0 or higher)
Functions	• Intensity • Frequency • Duty cycle • Mode selection • Phase shift
Software and API (C/C++/Python)	Available as separate options

Miscellaneous

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