

DAL light source

Calibrated light source

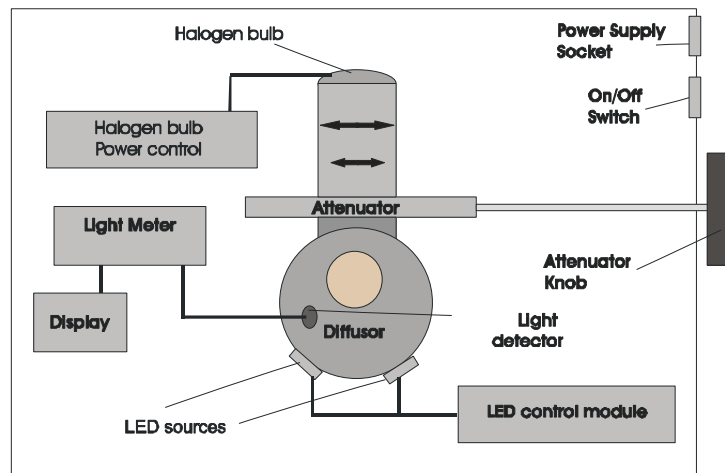


Fig. 1. Block diagram of DAL calibrated light source



Fig. 2. Photos of DAL calibrated light source

BASIC INFORMATION:

The DAL light source is a multi-channel calibrated light source. The source can work typically in three different modes: I) halogen bulb as a polychromatic light source for the spectral range 0.4-1 μ m, II) white LED as a light source at spectral range 0.4-0.7 μ m, III) monochromatic LED at 595 nm. Additional LED sources of different spectral ranges can be optionally added.

Intensity of the polychromatic light source (calibrated halogen bulb) is regulated using an opto-mechanical

attenuator that changes light intensity but does not change light color temperature. Intensity of the LED sources is regulated electronically using advanced electronic regulation/stabilisation system.

The DAL light source can be used as a standard source of visible and near infrared radiation to simulate day level and night level conditions in systems for testing visible/NIR imagers (color CCD cameras, monochrome CCD cameras, ICCD cameras, night vision devices).

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FEATURES:

- Ability to simulate both day conditions and night conditions due to extremely wide range of illumination regulation. *There is on the market no test system that could simulate illumination condition in so wide range.*
- Multi-channel light source. Ability to simulate light sources of different spectrum.
- Extremely high dynamic range and continuous regulation of luminance that enable over million of different luminance levels. Typical sources enable step luminance regulation or enable continuous regulation but for much smaller luminance range.
- User friendly design. The user is able quickly regulate light intensity of all light sources using several knobs. Current light intensity is presented on a digital display.
- Dual configuration. The source can be used in both vertical configuration or horizontal configuration test systems. This means the light emitter can be at the bottom or at the side of the DAL light source.
- Open policy of Inframet on recalibration. Inframet delivers information that enables users of DAL light sources to recalibrate these light sources.

SPECIFICATIONS

Parameter	Value
Illumination area diameter	40 mm
Number of work modes	3
Mode one	halogen bulb as a polychromatic light source for the spectral range 0.4-1 μ m.
Color temperature of halogen bulb	2856 K (or 3000 K)
Uncertainty of color temperature	50K
Regulation type	Continuous
Regulation method	Opto-mechanical attenuator
Luminance range	0.02 cd/m ² - 7000 cd/m ² - version D 0.01 mcd/m ² - 1 cd/m ² - version N 0.01 mcd/m ² - 1000 cd/m ² - version DN
Regulation resolution	0.01 cd/m ² (at low intensity range) – D version 0.01 mcd/m ² (at low intensity range) – N or DN versions
Mode two:	white LED as a source of polychromatic light source at spectral range 0.4-0.7 μ m.
Regulation method	Electronic regulation
Luminance range	0.01 cd/m ² - 1000 cd/m ² - version D 0.01 mcd/m ² - 1 cd/m ² - version N 0.01 mcd/m ² - 1000 cd/m ² - version DN
Regulation resolution	0.01 cd/m ² - version D 0.01 mcd/m ² - versions N, DN
Mode three:	Monochromatic LED emitting light at 595 nm.
Regulation method	Electronic regulation
Luminance range	Non-calibrated (relative digital units)
Dynamic	3 000 000 : 1
Dimensions	380x260x250
Mass	12 kg

*specifications are subject to change without prior notice

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