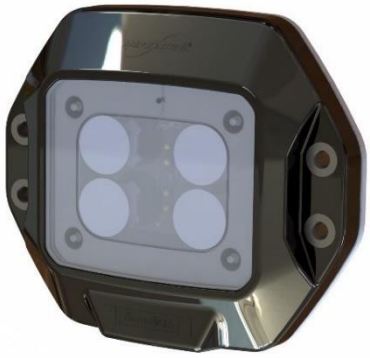
TECHNICAL DATA SHEET

IS LEDe - IS HEADLIGHT

Applications



Ampcontrol Burn-Brite's Intrinsically Safe Headlight, IS LEDe is designed for hazardous area industrial applications. Application examples include underground mining, vehicle lighting, fixed and mobile machine lighting, tunnelling and fixed infrastructure applications. For underground coal mining IS LEDe lights require less quantity of inspections than Ex d lighting solutions, and if damaged are easily replaced and are not a flameproof reportable incident.

The IS LEDe headlight has externally controllable independent LED circuits, with 2 x white primary light circuits and 2 x secondary coloured light circuits. Secondary circuit colour options include any two colours of red, amber, blue or green; this needs to be selected at time of ordering.

The IS LEDe headlight is suitable for harsh industrial environments. The body and window are both moulded from impact resistant polymers with the body polymer also having fire retardant and anti-static properties. Proprietary sealing and encapsulation provides IP66 ingress protection and thermal management. Further examples of IS LEDe applications include vehicle headlight, taillight, identification light, emergency light & spotlight and are easily retrofitted into existing electric vehicle wiring systems. Also supported are fixed plant applications for both solid and flashing colour arrangements.

Features

- Designed for hazardous environments (Group I: Zone 0 / Zone 1)
- Suitable for mining vehicle lighting & mining machine lighting
- Low profile
- Flame retardant
- IP66
- High energy efficiency
- Cable to integrate into vehicle control system
- Colours: White, Red, Blue, Green & Amber
- Four independent colour circuits (two white, two secondary colours)
- >75 Lux level at 10m with two headlights as per the MDG 1

IECEx Certifications

- Comply with IEC60079.0, IEC 60079.11 and MDG 1
- Category: Ex ia I Ma IP66
- Certification Number IECEx ExTC 21.0002X

Electrical Specification		Value	Units
Input voltage range		10–13	VDC
Current (White 1x circuit) @10V		370	mA
Current (Colour 1x circuit) @10V		250	mA
Operating Temp. (Ta)		-20 +40	°C
IS Parameters	**Ui**	**Ii**	**Ci & Li**
	13VDC	2.5A	[1]Negligible

White (Primary LED)	Value	Units
Flux	~740	Lm
Illuminance at 10m	49.7	Lux
Beam angle	17	Degree
Colour temperature	~5000	K

[1] For installation, the additional capacitance and inductance of the integral cable shall be considered.

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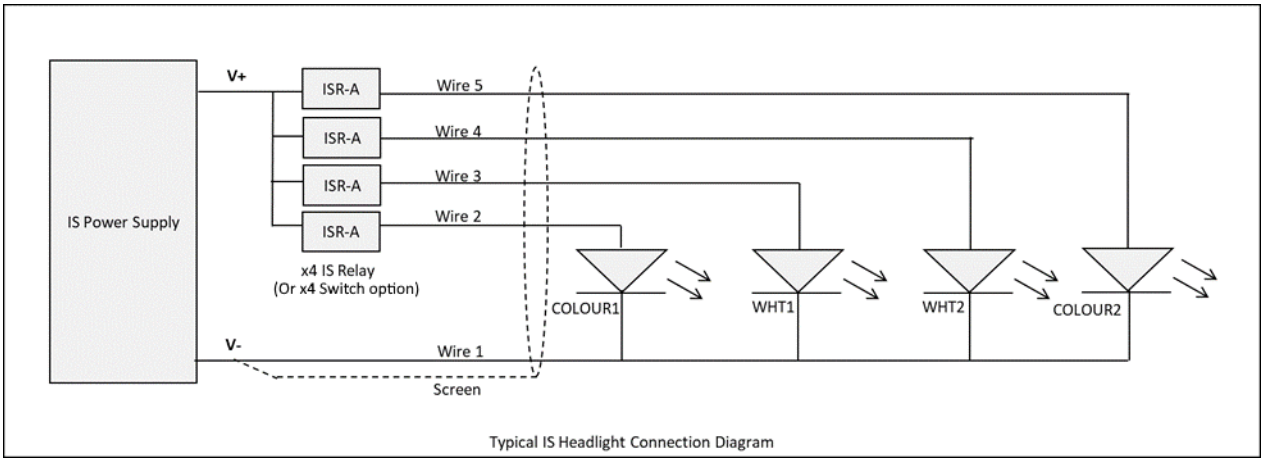
Operation

The IS LEDe headlight has four independent light circuits, comprised of two whites and two colour circuits. All circuits share a common ground. The light can operate in various modes depending on the input supply connection, such as headlight, tail light, or emergency vehicle. Other light applications can be configured as per the wiring diagram below. Pulsing the relay allows flashing lights for emergency or other warning situations using the various colour choices.



Typical IS Headlight Connection Diagram

Connections:

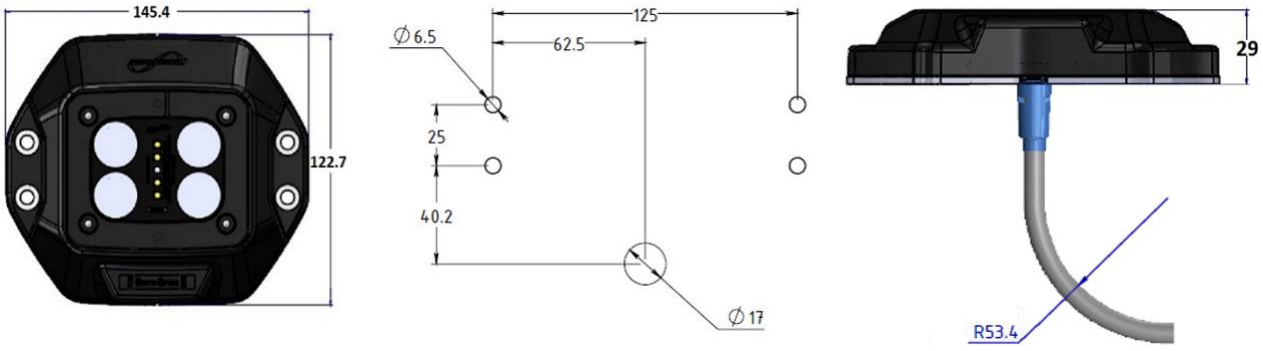
Input Cable Connections

- The IS LEDe comes with 5 cores 1.5mm^2 'INTRINSICALLY SAFE' according to IEC 60079.14 integral cable. The cable length provided is 10m and can be cut to length as required by customer.
- All the colour inputs share a common ground.
- Product installation must respect the conditions of safe use, including suitable IS parameter matching and an appropriate IS power supply.
  Note: For installation, the additional capacitance and inductance of the integral cable shall be considered.

Parameters	Capacitance	Inductance
Integral cable	250pF/m	0.52µH/m

Cable Wire marking	Connection
Wire 1	GND
Wire 2	Colour 1 input
Wire 3	White 1 input
Wire 4	White 2 input
Wire 5	Colour 2 input

Recommended Mounting Footprint



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