Electro Diesel
RUSTENBURG (Pty) Ltd
Reg. No. 2002/02425/07

Rustenburg Branch Tel: (014) 592 0634/5/6
Steelpoort Branch Tel: (013) 230 9535

Product Name

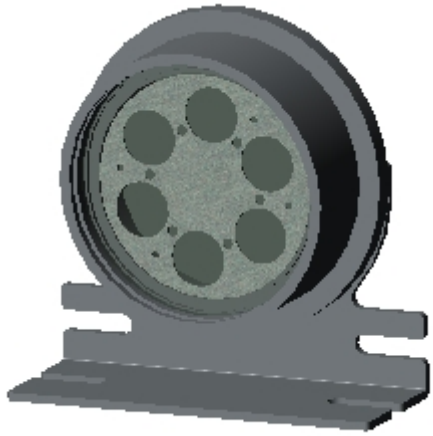
LED Underground Mine Light

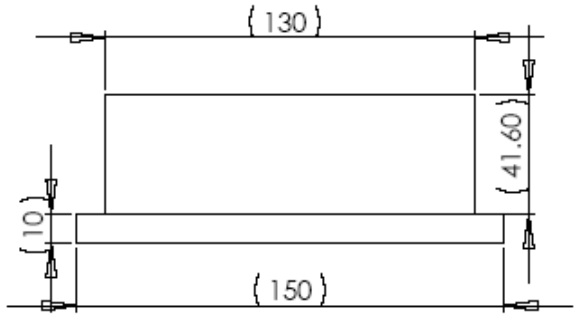
Description

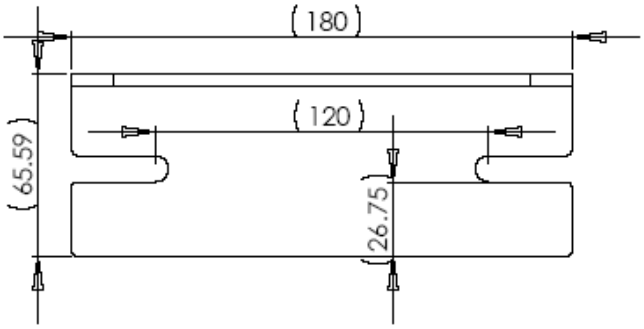
Light designed for replacement of incandescent lights on mine underground vehicles and tracked vehicles

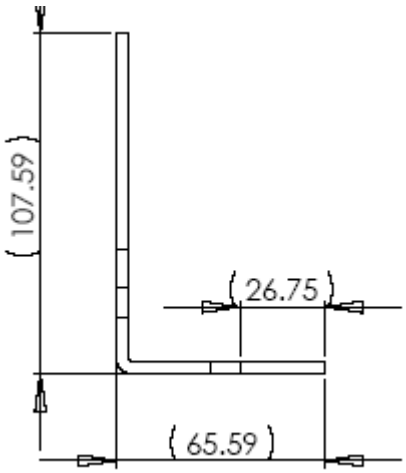
Technical Specification

Electrical General	
Minimum input Voltage	11 Vdc
Max input Voltage	40Vdc
Power	12Watts Nominal
Power Supply Efficiency	98%-95%
Current at 12V	1 Amps
Current at 24V	0.5 Amps
Operating Temperature	-10 deg – 50 deg
Electrical Protection	Transients/ 40V Switch Out
Thermal Protection	Thermal shut down with Hysteresis at ambient temperature of 65deg
General Light Performance	
Lumens	680 lumens
CRI index	82
Colour Temperature	4500K
Peak Lux at 20M	36Lux
Light Source	6 x 3Watt Cree 6 x 5mm Red
Led Max Junction Temperature	150deg
Led Recommended Junction Temperature	>90deg
Dimensions	
Diameter	150mm
Height	60mm
Mass	1.5Kg
Construction	
Body	Aluminum
Lens	6mm Glass
IP rating	IP68
Construction	Modular can replace all parts. No Casting Designed for high vibration environment
Mounting Protective coating	Sherardized (1500h) salt spray See www.distekafrica.co.za.

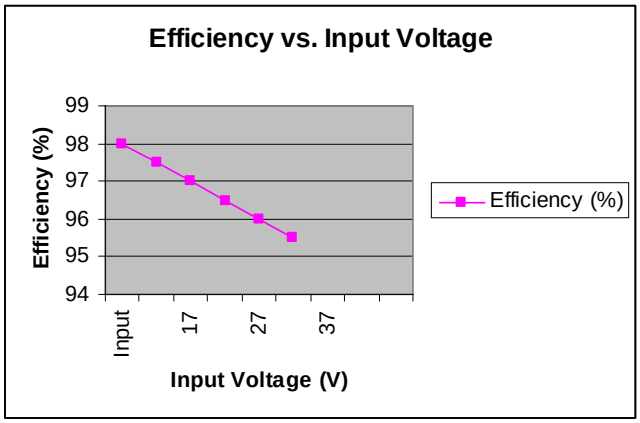




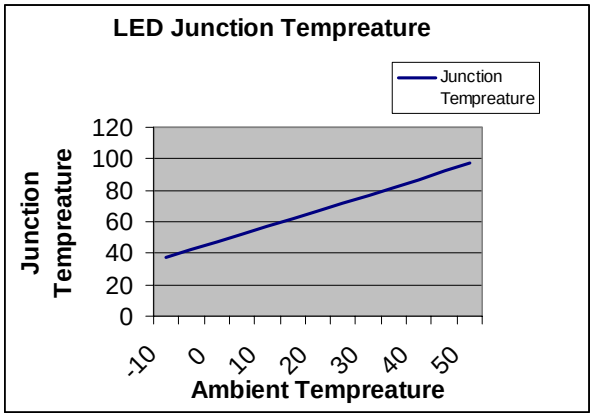




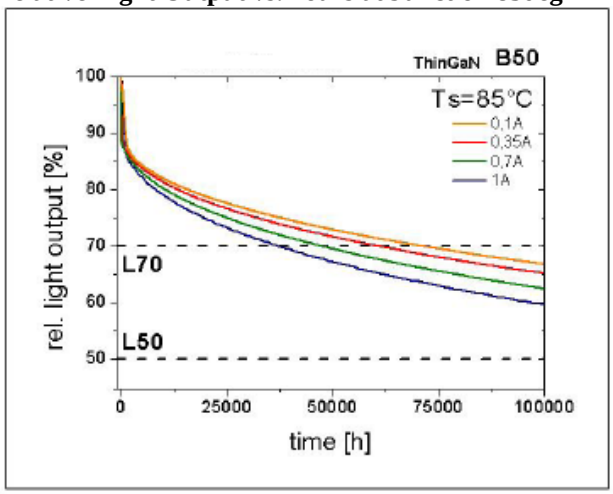
Power Supply Efficiency vs. Input Voltage



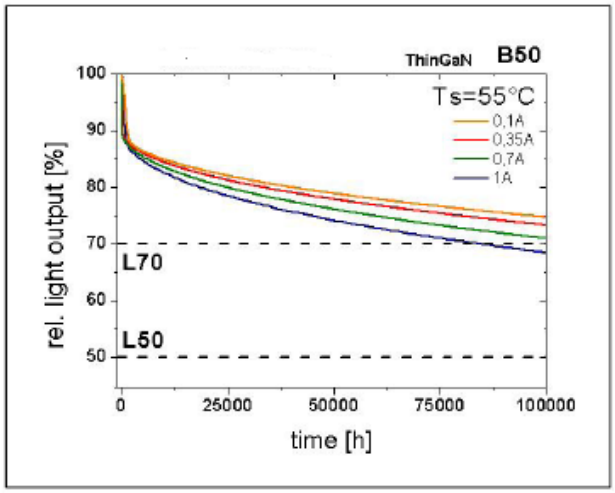
Junction Temperature vs. Ambient Temperature



Relative Light Output vs. hours at Junction 85deg



Relative Light Output vs. hours at Junction 50deg



Fault Protection

These are faults which cause the voltage of the power supply to go outside normal limits for a period of time. Many transients are capable of causing immediate equipment failures

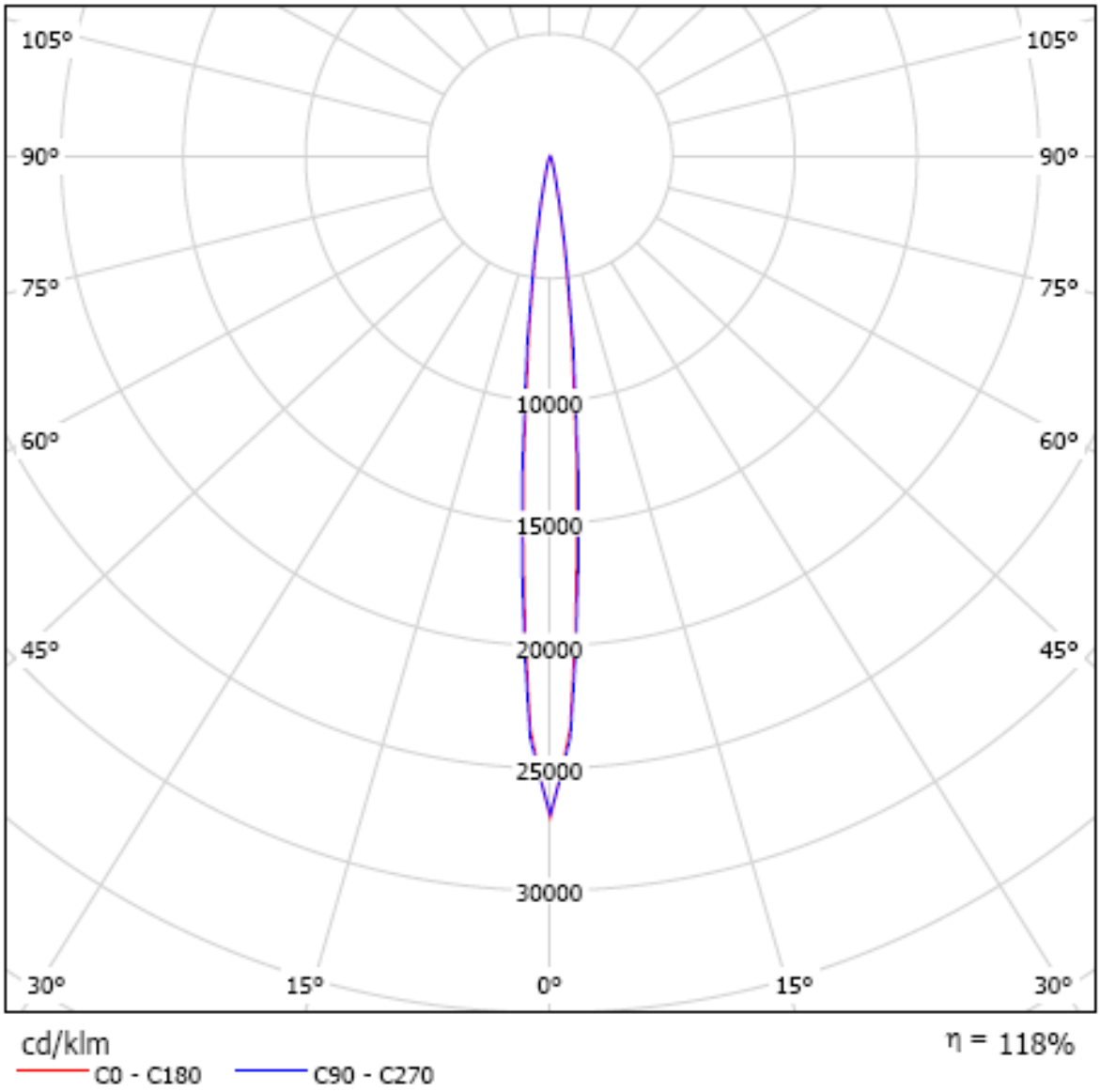
Light is protected to 1.5Ke rating. i.e For 350ms at 52V at 55Amps

TRANSIENT:	**Typical Voltage:**	**Length:**	**Protection Mode**
Failed 24 Volt Regulator	+36V	Continuous	Normal Operation
Booster Start (12V systems)	+/- 24V	1-5 min.	Normal Operation
Load Dump	60-125V	5-400+ ms.	Clamped. Rating 1.5Ke
Inductive Load Switching	-300V to +80V	up to 320 ms	Clamped. Rating 1.5Ke
Alternator Field Decay (each engine turn-off)	-125 to -60V	up to 200 ms	Clamped. Rating 1.5Ke
Ignition Pulse (battery disconnected)	up to 75V	90 ms typ.@ 500 Hz	Clamped. Rating 1.5Ke
Mutual Coupling in wire harness	up to 200V	1 ms	Clamped. Rating 1.5Ke

Light LDC Polar Diagram Narrow Beam Version

Ledil Oy 10324_Rocket-SS_12W Train 10324_Rocket-SS_12W Train / LDC (Polar

Luminaire: Ledil Oy 10324_Rocket-SS_12W Train 10324_Rocket-SS_12W Train
Lamps: 1 x Cree XR-E (white)



Light Luminous intensity table and Luminance table Narrow Beam Version

Ledil Oy 10324_Rocket-SS_12W Train 10324_Rocket-SS_12W Train / Luminous intensity table

Luminaire: Ledil Oy 10324_Rocket-SS_12W Train 10324_Rocket-SS_12W Train
Lamps: 1 x Cree XR-E (white)

Gamma	C 0°	C 15°	C 30°	C 45°	C 60°	C 75°	C 90°
0.0°	27026	27026	27026	27033	27040	26986	26893
5.0°	12374	12557	12716	12961	13144	13276	13269
10.0°	2598	2668	2858	2973	2954	2863	2810
15.0°	614	640	667	674	659	662	674
20.0°	247	245	245	246	254	263	272
25.0°	116	118	116	116	121	127	129
30.0°	61	61	60	62	65	68	69
35.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Values in cd/klm

Ledil Oy 10324_Rocket-SS_12W Train 10324_Rocket-SS_12W Train / Luminance Table

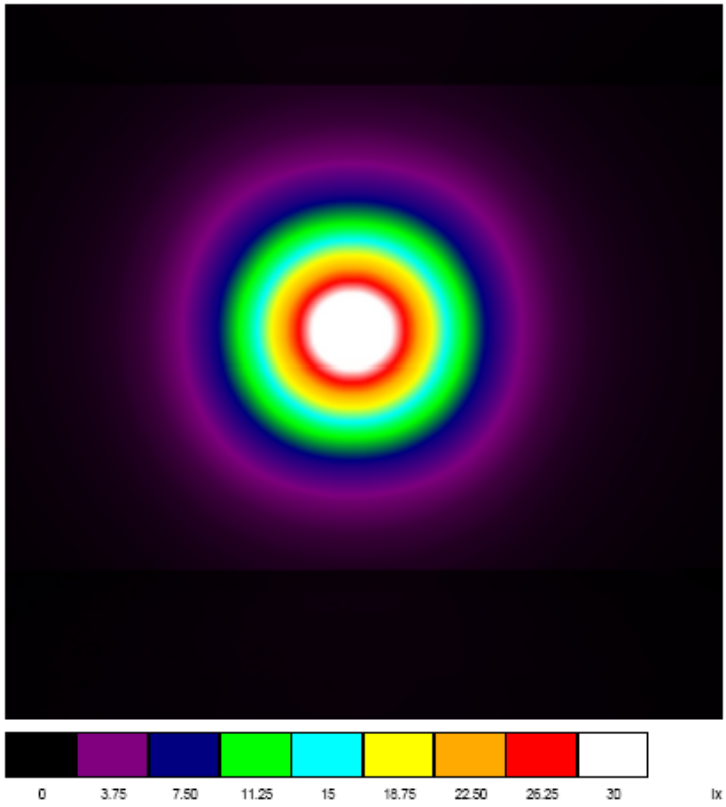
Luminaire: Ledil Oy 10324_Rocket-SS_12W Train 10324_Rocket-SS_12W Train
Lamps: 1 x Cree XR-E (white)

Gamma	C 0°	C 15°	C 30°	C 45°	C 60°	C 75°	C 90°
0.0°	54167588	54167588	54167588	54180939	54194291	54087177	53899654
5.0°	23074340	23414569	23711126	24167948	24508701	24756100	24741717
10.0°	4561754	4685185	5017498	5219323	5186454	5026422	4933940
15.0°	1025124	1068787	1114683	1126520	1100835	1106887	1126966
20.0°	396149	392717	393145	395722	407309	422976	436067
25.0°	180164	183909	180164	180997	188902	196912	200761
30.0°	92739	93349	91519	94570	99247	103111	104942
35.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
40.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
55.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
65.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
75.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
80.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00
85.0°	0.00	0.00	0.00	0.00	0.00	0.00	0.00

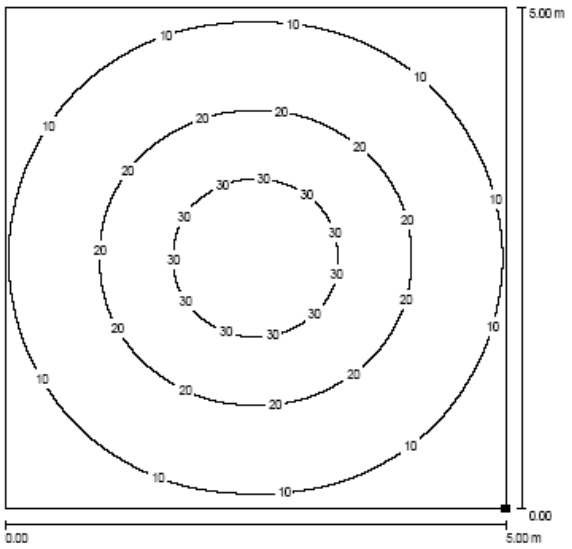
Values in Candela/m².

Light Output at 20m / False Colour Rendering /Isolines Narrow Beam Version

Room 1 / False Color Rendering

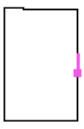


Room 1 / Calculation Surface 1 / Isolines (E, Perpendicular)



Values in Lux, Scale 1 : 40

Position of surface in room:
Marked point:
(20.000 m, 12.500 m, 2.500 m)



Grid: 128 x 128 Points

E_{av} [lx]	E_{min} [lx]	E_{max} [lx]	u0	E_{min} / E_{max}
16	3.88	36	0.240	0.108