Light is OSRAM

ELEMENT EM DIM 90/220– 240 /2A0 CS F L

Constant Current LED Power Supply

1500/1750/1850/2000mA

ELEMENT LED Power Supply is the reliable choice for
linear and area fixtures for office - industrial - shop lighting

Benefits
High efficiency up to 89%
Enable slim fixture design with flat 16.5mm height metal housing
0-10V dimming with DIM to off functionality
SELV driver

Applications
Linear and area lighting
Office - shop

Approbations & Certifications
KC / CE / UKCA/ CCC / RCM /TISI
In preparation, if not already printed on product label

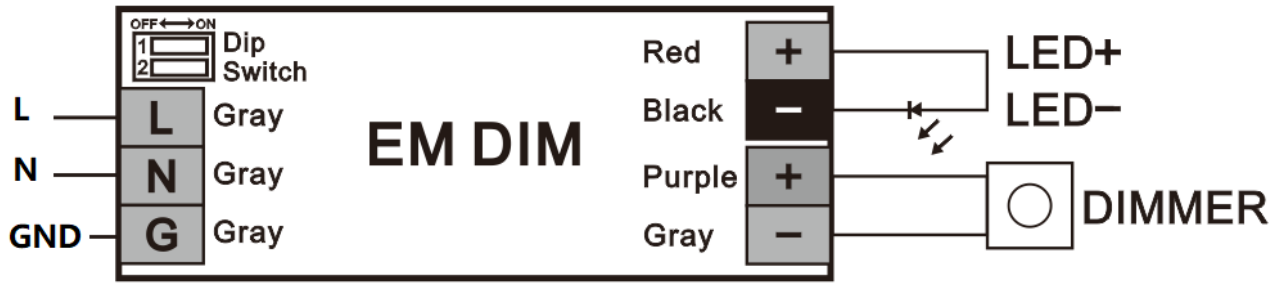
Product Features

- Output current:

  1500/1750/1850/2000mA
- Output Voltage:

  30-45V
- Output power :
  45-90W
- Input voltage: 220 – 240V_{AC}
- 0-10V dimming with dim to OFF
- High efficiency up to 89%
- Low THD < 15% @ full load
- Low ripple < 5%
- Ambient temp range ta : -25 to +50°C
- 35,000Hrs lifetime @ Tc Max

	Item	Value	Unit	Remarks
INPUT	Nominal voltage	220 – 240	V	
	Nominal frequency	50 / 60	Hz	
	AC voltage range	198 – 264	V	
	DC voltage range	NA	V	
	Maximum voltage	300	Vac	2 h maximum, unit might not operate in this abnormal condition
	Nominal current	0.453	mA	230V @full load
	Total Harmonic Distortion (THD)	< 15	%	Full load AC230V
	Power factor	≥ 0.95		Full load, 230 V, 50 Hz / see graphs
	Efficiency	89	%	Full load, 230V, 50 Hz / see graphs
	Stand-by power	0.5	W	
	Power loss	11.12	W	Full load, 230V, 50 Hz
	Protection class	I		suitable for class I fixture
	Inrush current	40	A	t_{width} = 150 µs typical (measured at 50% Ipeak)
	Leakage current	<0.7	mA	Output floating
	Max. units per circuit breaker	B10: 6 B16: 10 B25: 16 C10: 11 C16: 17 C25: 27		
OUTPUT	Nominal voltage range	30-45	V	
	Maximum voltage	60	Vdc	w/ Open Circuit
	Nominal current range	1500/1750/1850/2000	mA	
	Current accuracy	+/- 7.5	%	
	Current ripple 100Hz	< 5	%	Ripple / average @ 100 Hz
	Pst LM	≤ 1		
	SVM	≤ 0.4		
	Nominal power range	45-90	W	Partial Load. Refer to Table for details
	Maximum power	90	W	
	Galvanic isolation	SELV Double isolation Supplementary isolation		Output to mains DIM to mains DIM to Output
0-10V / Dimming	Dimming control	Yes		
	Dimming method	0-10V		Dim to off functionality
	Dimming range	3~100	%	
	Dimming Standard	NA		
ENVIRONMENT	Ambient temperature range t_a	-25 …+50	°C	
	Maximum case temperature t_c	80	°C	Measured on t_c point indicated of the product label
	Max. case temp. in fault condition	110	°C	
	Storage temperature range	-25 …+80	°C	
	Relative humidity	5 ... 85	%	Not condensing
	Surge transient protection	1 | 2	kV	L/N | LN/PE acc to. EN 61547 Clause 5.7
	Environmental rating	Indoor		
	Dimension	360x23x16.5	mm	L*W*H+/-0.5mm
	Weight	215	g	
	Mains switching cycles	> 100’000		
	Expected lifetime	35’000 50’000	hrs	t_{cmax} = 80°C, max. 10% failure rate t_{cmax} = 70°C, max. 10% failure rate



Load wire length: 2m max
Wires cross section: solid wire 0.5-1.5 mm^2 / flexible leads 0.75 – 1.5 mm^2
Hot plug-in or secondary switching of LEDs is not permitted and may cause a very high current to the LEDs. Indication that the lamp control gear relies upon the luminaire enclosure for protection against accidental contact with live part

Protections

Over temperature

Automatic, auto reversible

Overload

Automatic, auto reversible

No load

Yes

Short-circuit

Automatic, auto reversible

Input overvoltage

Maximum allowed input voltage 300V AC

Output overvoltage

Yes, Limitation of Output voltage < 60V

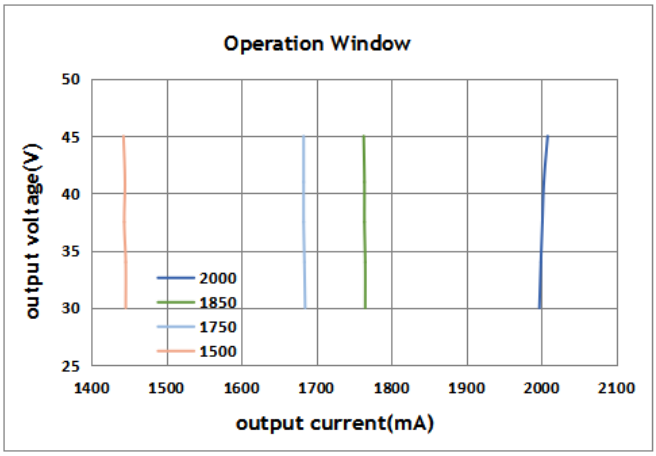
Output undervoltage

NA

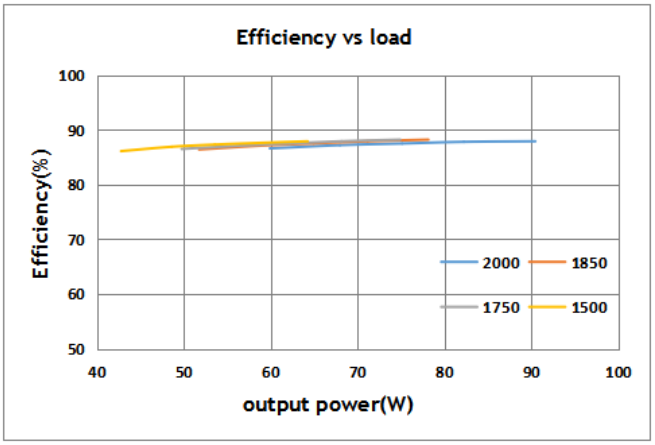
LED load protection

NA

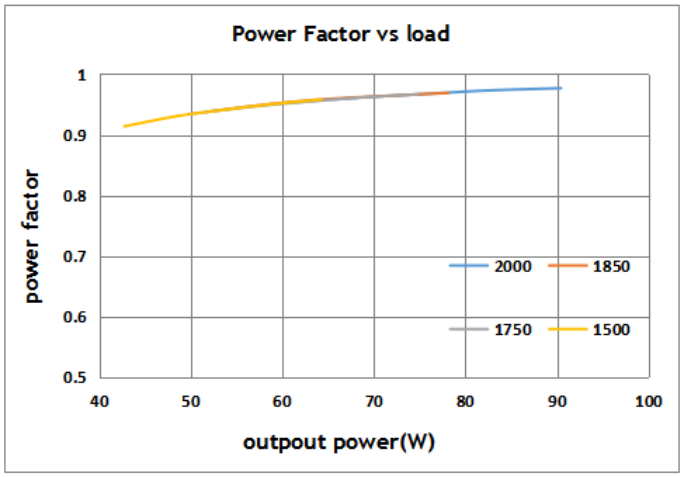
Typical Operating window



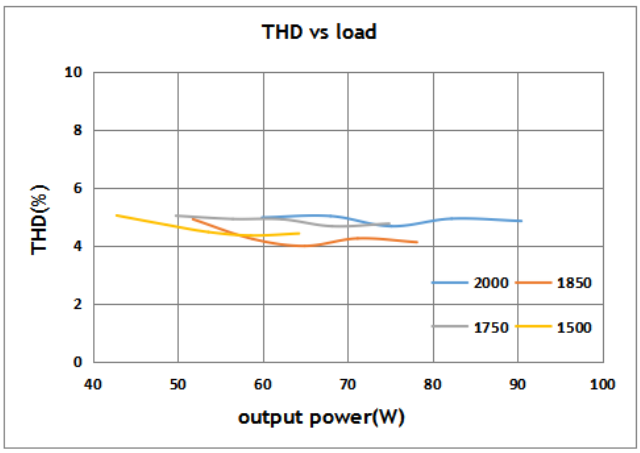
Typical Efficiency vs load



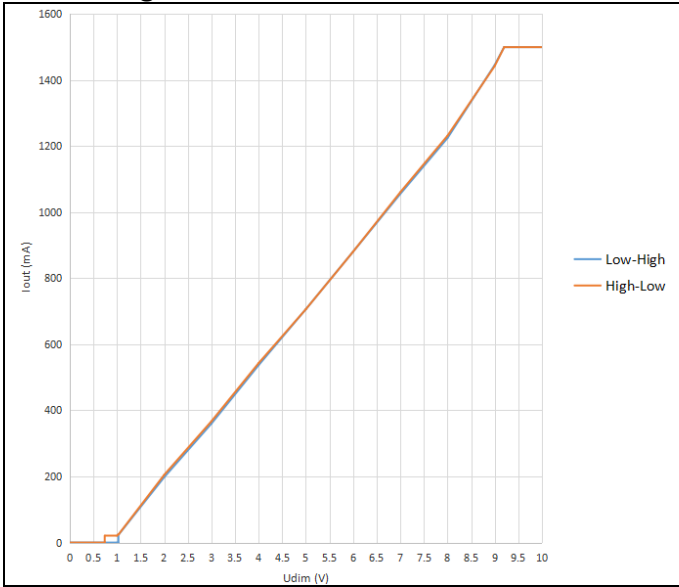
Typical Power factor vs load

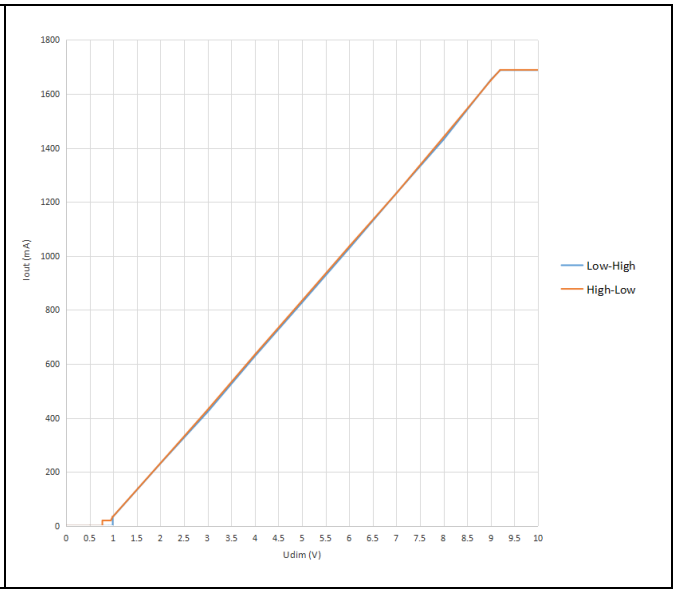


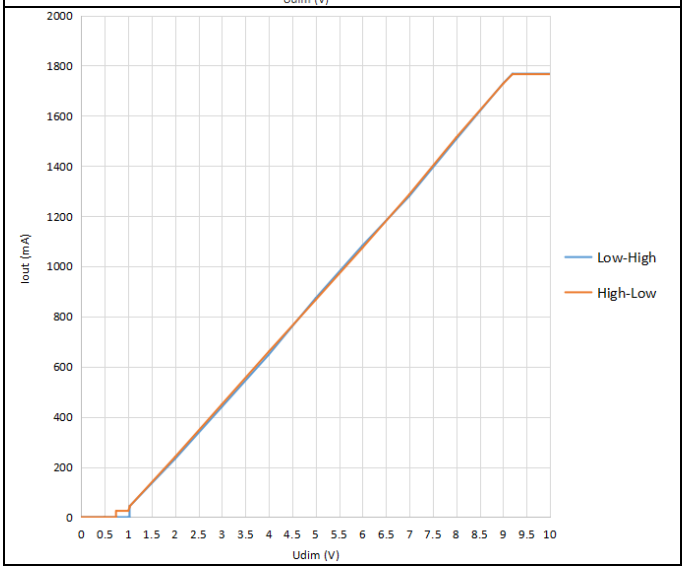
Typical THD vs load



Dimming curve







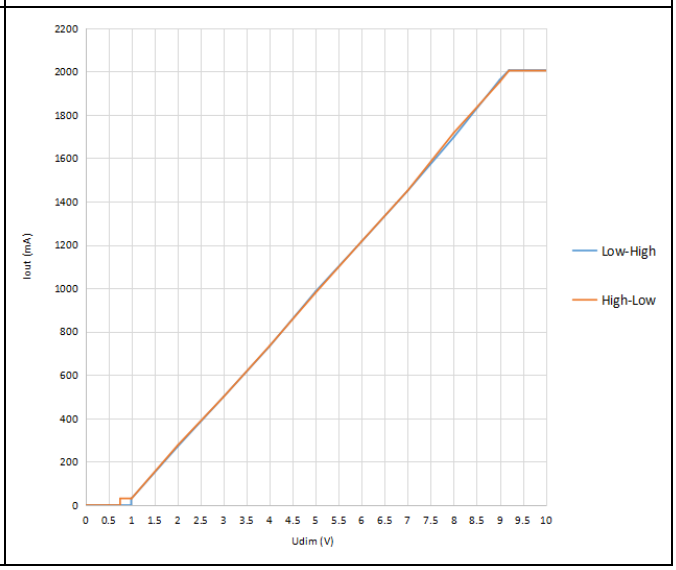


Table 1 - Rated output power and current sets				
Iout [mA]	**1500**	**1750**	**1850**	**2000**
U min [V]	30	30	30	30
U max [V]	45	45	45	45
P min [W]	45.0	52.5	55.5	60.0
P max [W]	67.5	78.8	83.3	90.0
Ta [°C]	50	50	50	50
Tc [°C]	80	80	80	80
Line Current, nominal@230V [A]	0.350	0.398	0.420	0.460
Max Power Loss@230V [W]	8.34	9.73	10.29	11.12
Input Power @230V [W]	75.84	88.48	93.54	101.12

PIN1	PIN2	**I**rated[mA]
OFF	**OFF**	**1500**
OFF	**ON**	**1750**
ON	**OFF**	**1850**
ON	**ON**	**2000**

Current selection by DIP-switch

Note：

System compatibility with dimmer, controller and LED module need to be verified before product purchasing, installation or operation.

Ecodesign regulation information:
Intened for use with constant current LED module

The forward voltage of the LED light source must be within the defined operating window of the control gear in all dimming positions

Separate control gear and light sources must be disposed of at certified disposal companies in accordance with Directive 2012/19/EU (WEEE) in the EU and with Waste Electrical and Electronic Equipment (WEEE) Regulations 2013 in the UK. For this purpose, collection points for recycling centres and take-back systems (CRSO) are available from retailers or private disposal companies, which accept separate control gear and light sources free of charge. In this way, raw materials are conserved and materials are recycled.

For Austrailia and New Zealand


Risk of electric shock

WARNING: FELV terminals marked “Risk of electric shock” are not safe to touch.
WARNING: Circuits connected to any FELV control terminal shall be insulated for the LV supply voltage of the controlgear and any terminals connected to the FELV circuit shall be protected against accidental contact.

Standards

Safety: IEC 61347-1, IEC 61347-2-13

Performance: IEC 62384

Harmonic content: IEC 61000-3-2

Immunity: IEC 61000-4-5

IEC 61547

Product name	EAN10	EAN40	Pieces / box
EM DIM 90/220-240/2A0 CS F L	4062172311168	4062172311175	30

Recommended dimmer	EAN10	EAN40	Pieces / box
DIM MCU G2	4062172224642	4062172224659	48

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