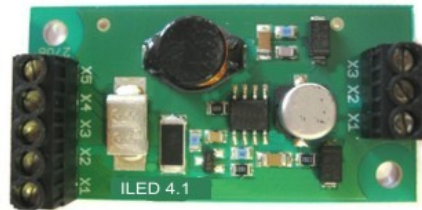


# I LED 4.1

Precision constant current  
power supply



**DATASHEET**

Rev. 1.2

## 1 General Description

The ILED V4.1 is a constant current power supply for high brightness LEDs. It works as a step down regulator with low side current measurement for regulation. Dimming the output current is possible using the DIM-input with a PWM signal. The output current may be switched on or off by using the DIM-input. For simple wiring there are solder pads. The solder pads for supply and dimming are duplicated for wiring the regulators in a serial topology. The LED driver design is small sized: 25mm x 50mm. The application on a metal core board allows running the power supply at a high output current without additional heat sinks.

## 2 Features

- Input Voltage Range up to 36V
- Output current values: 350 mA, 700 mA, 1000 mA, 1400 mA
- Protection of outputs
- Metal core PCB for optimal thermal management
- High efficiency (>92%)
- Thermal shutdown
- Single pin on/off and brightness control using PWM-Signal
- Two holes (Ø 3,2 mm) for easy mounting
- Small size 25 x 50 mm
- Optionally with screw connectors for fast assembly

## 3 Pinning



Name	Symbol	Description
X1	$V_{in+}$	Positive supply voltage
X2	$V_{Dim}$	Dimming, on/off input
X3	$V_{in-}$	Negative supply voltage
X4	$I_{out+}$	Positive output
X5	$I_{out-}$	Negative output

## 4 Absolute maximum ratings

Maximum supply Voltage:	36V
$V_{dim}$ input Voltage	$-0.3 \leq V \leq +25V$
Power dissipation	internally limited
Current through $V_{in+}$	4A
Current through $V_{in-}$	4A
Current through $I_{out+}$	internally limited
Current through $I_{out-}$	internally limited
Storage temperature range	$-40^{\circ}C$ to $150^{\circ}C$

**Note:** All voltages respect to  $V_{in-}$

## 5 Operating condition:

Supply Voltage:	5V to 36V (24V typical)
Temperature range	$-40^{\circ}C$ to $+80^{\circ}C$

## 6 Electrical characteristics

Type	Symbol	Parameter	Condition	Value		
				Min	Typ	Max
ILED 4.1-350	$I_{out}$	Output current	$V_{in+} = 24VDC,$ $V_{dim} = V_{in-}$ $P_{out} = 6,5 W^1$	-5%	350 mA	+5%
ILED 4.1-700	$I_{out}$	Output current	$V_{in+} = 24VDC,$ $V_{dim} = V_{in-}$ $P_{out} = 15 W^2$	-5%	700 mA	+5%
ILED 4.1-1400	$I_{out}$	Output current	$V_{in+} = 24VDC,$ $V_{dim} = V_{in-}$ $P_{out} = 21,4 - 35,2 W^3$	-5%	1400 mA	+5%

<sup>1</sup> Tested with 6 pcs OSRAM Golden Dragon

<sup>2</sup> Tested with 1 pcs OSRAM OSTAR HEX

<sup>3</sup> Tested with 2 pcs LAMINA TITAN RGB

### PWM dimming characteristics

