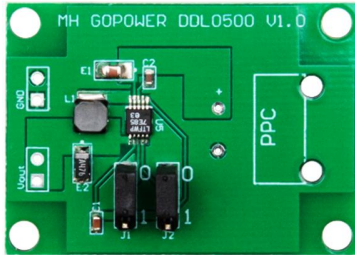


# MIH<sup>®</sup> Step-Down DC/DC Converter

## DDL0500

## Datasheet



### Key Features:

- Input Voltage Range: 2.7V to 20V
- Output Voltage Level: 2.8V, 3.0V, 3.3V, 5.0V
- 80mA Output Current
- Efficiency up to 92%

### Applications:

- Power over Fiber (PoF)
- Remote Sensors
- Portable Products
- Battery-Operated Devices

### Product Description

MH GoPower (“MHGP”) provides high efficiency low power step-down DC/DC converter modules which are capable of supplying up to 80mA of load current. With 2.7V to 20V input operating range, users can set the output voltage to 2.8V, 3.0V, 3.3V, 5.0V by pin selection. The DDL0500 also incorporates undervoltage lockout (UVLO) safety feature to disable the converter and maintain a low quiescent current state when the input voltage falls below 2.3V. Although the DDL0500 is designed for MHGP’s YCH-L series Photovoltaic Power Converters (PPCs), it can also be used as a general purpose step-down DC/DC converter.

### Absolute Maximum Ratings

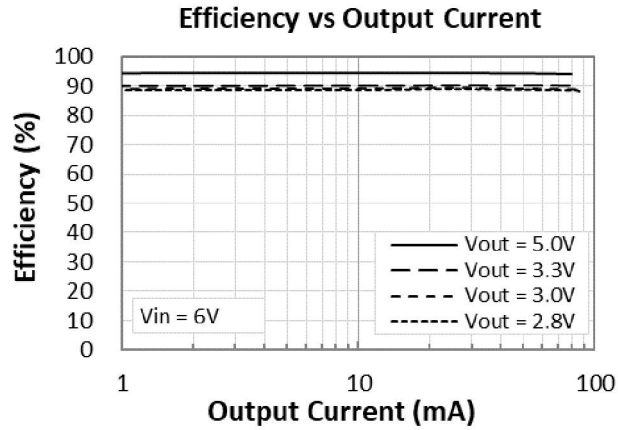
Parameter	Range
Input Voltage	-0.3V ~ 22V
Output Current	0 ~ 80mA
Operating Temperature	-40°C ~ 85°C
Storage Temperature	-40°C ~ 105°C

### Electrical Characteristics \*

Parameter	Condition	MIN	TYP	MAX
Input Voltage (Vin)	-	2.7V	-	20V
Output Voltage (Vout)	Vin = 6V, Vset = 2.8V	2.64V	2.76V	2.80V
	Vin = 6V, Vset = 3.0V	2.90V	2.96V	3.00V
	Vin = 6V, Vset = 3.3V	3.16V	3.26V	3.29V
	Vin = 6V, Vset = 5.0V	4.88V	4.95V	4.98V
Vin Undervoltage Lockout Threshold (V <sub>UVLO</sub> )	-	2.15V	2.30V	-
Ripple	Vin = 6V, R <sub>L</sub> = 60 Ω	-	-	100mVp-p

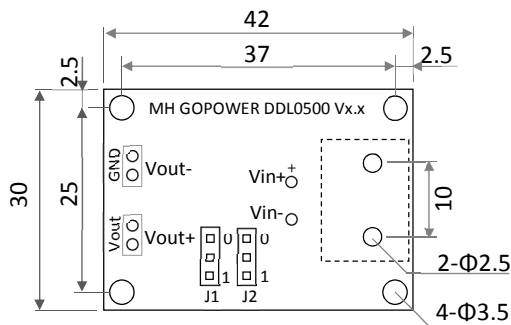
\* Typical converter performance with ambient temp of ~25°C

## DDL0500 Efficiency



## Mechanical Dimensions and Pin Configurations


( Unit: mm )



Weight: 7g

Output Voltage Selection

J1	J2	Vout
0	0	2.8V
0	1	3.0V
1	0	3.3V
1	1	5.0V

 PPC installation area: YCH-L series PPC (available for purchase)