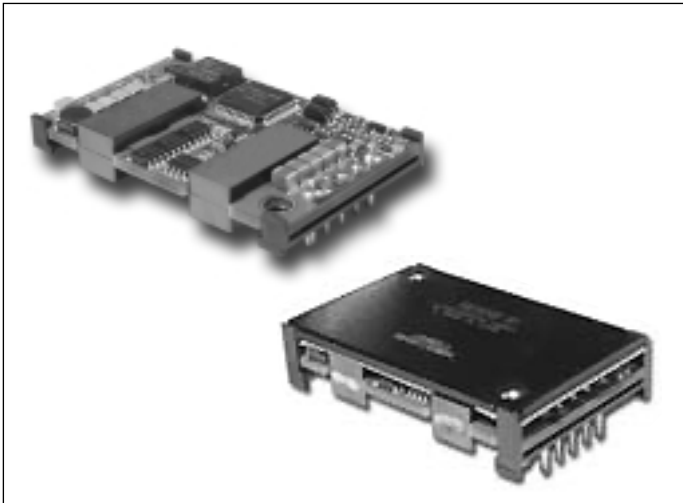


# DC/DC Quarter Bricks/High Efficiency

## XPIQ inc.

Intelligent Design Quality Product

## Up To 25 Amps ILQ50/100 Series



- Low Voltage Outputs
- High Power Density
- Efficiency 89% on 3.3 volt
- Telecom Approval & Compliance
- Wide Operating Temperature
- International Safety Approvals
- Meets Tight 0.6" Board Pitch Requirements

## Specification

### Input

- *Input Voltage* 36-76 VDC
- *Input Current* 0.8 A - 2.37 A typical for ILQ100  
0.39 A - 1.18 A typical for ILQ50
- *Remote On/Off* Negative Logic standard  
Positive Logic available
- *Input Reverse Voltage Protection* External components required

### Output

- *Output Voltage* 1.2-5 VDC
- *Output Voltage Adjustment* -20%, +10% (1.2V, 1.8 V, 2.5 V), ±15% (3.3 V, 5 V)
- *Line Regulation* ±0.5% max
- *Load Regulation* ±1.0% max
- *Output Voltage Accuracy* ±1%
- *Ripple & Noise* 100 mV max
- *Transient Response* 5% deviation 100 µs recovery time for a 50% load step
- *Temperature Coefficient* 0.02%/°C
- *Remote Sensing* Standard
- *Overvoltage Protection* 120% - 140% auto restart
- *Overcurrent Protection* 105% - 140% for ILQ100 auto restart  
105% - 150% for ILQ50 auto restart
- *Short Circuit Protection* Protected to short circuit conditions
- *Over Temperature Protection* Shutdown in overtemp condition

### General

- *Efficiency* 89% at 3.3 V (ILQ100)
- *Isolation Voltage* 1500 VDC Input to Output  
1500 VDC Input to Baseplate  
500 VDC Output to Baseplate
- *Package Style* Open frame, baseplate option for ILQ100
- *Weight* 50g Open frame  
75g (baseplate 100 W)

### Environmental

- *Operating Temperature* -40°C to +85°C Ambient;  
100°C with baseplate  
with 200LFM air  
ILQ100: full power to 50°C  
ILQ50: full power to 75°C  
see derating charts
- *Cooling* Convection or Forced Air
- *Humidity* 5-95% RH non condensing
- *Storage Temperature* -40°C to +100°C
- *Shock* 196.1 m/s<sup>2</sup>
- *Vibration* 10-55 Hz (1 min) amplitude  
0.825 mm constant X, Y, Z axis  
1 hour each.

### Safety

- *Safety Approvals* UL1950, EN60950, CSA950  
CE Marked for LVD
- *EMI/EMC* FCC level B Part 15 with external filtering
- *Warranty* 1 Year

# OUTPUT VOLTAGE & CURRENT RATINGS

ILQ 50-100

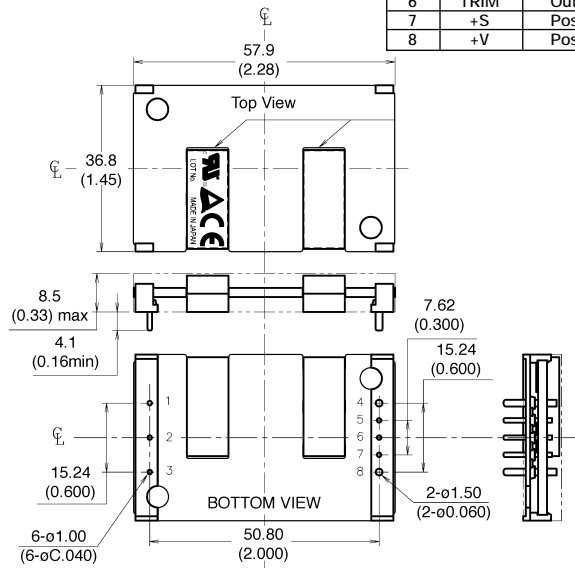
Power (Watts)	Voltage	Maximum Current	Efficiency	Model 48 V Input
<b>Single Output</b>				
14.4 W	1.2 V	12.0 A	78%	ILQ50-312AL
21.6 W	1.8 V	12.0 A	83%	ILQ50-318AL
30.0 W	2.5 V	12.0 A	85%	ILQ50-325AL
39.6 W	3.3 V	12.0 A	88%	ILQ50-300AL
50.0 W	5.0 V	10.0 A	90%	ILQ50-301AL
30.0 W	1.2 V	25.0 A	80%	ILQ100-312AL
45.0 W	1.8 V	25.0 A	84%	ILQ100-318AL
62.5 W	2.5 V	25.0 A	86%	ILQ100-325AL
82.5 W	3.3 V	25.0 A	89%	ILQ100-300AL
100.0 W	5.0 V	20.0 A	90%	ILQ100-301AL

## Notes

1. For Positive On/Off logic, replace suffix "L" with suffix "H".
2. For ILQ 100 Series only - change AL suffix to BL suffix for baseplate version.

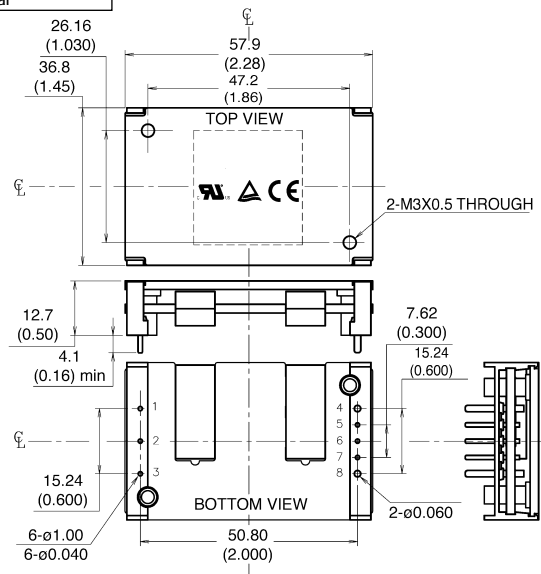
## Mechanical Details

Open Frame Models  
ILQ50 or ILQ100  
"AL" or "AH" suffix



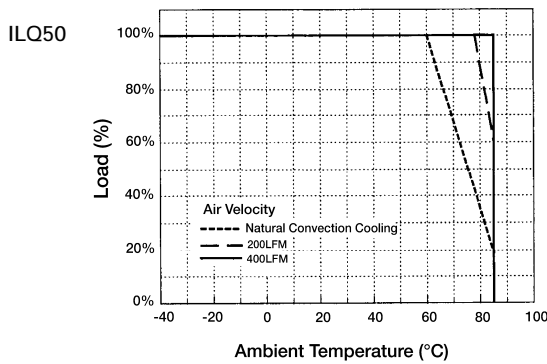
Pin Out		
Pin#	Label	Function
1	-Vin	Negative Input Terminal
2	CNT	ON/OFF Control Terminal
3	+Vin	Positive Input Terminal
4	-V	Negative Output Terminal
5	-S	Negative Remote Sensing
6	TRIM	Output Voltage Adjustment Terminal
7	+S	Positive Remote Sensing
8	+V	Positive Output Terminal

Baseplate Models  
Available on ILQ100 only  
"BL" or "BH" suffix

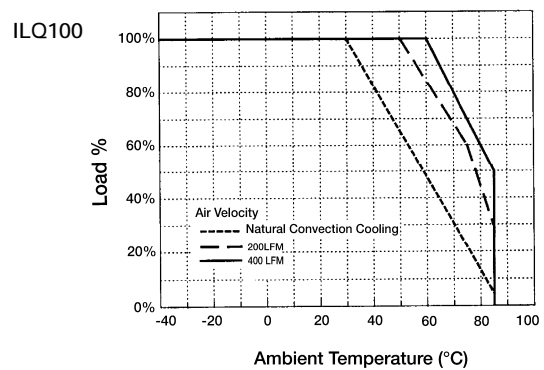


=NOTE= Dimensions are in millimeters and (inches)  
Tolerances \*\*.mm±0.5mm (\*\*.in.±0.02in.)  
\*\*\*mm±0.25mm (\*\*\*.in.±0.010in.)

## Derating Curves



Open Frame ILQ50-300AL unit used as a standard curve.



Open Frame ILQ100-300AL unit used as a standard curve.