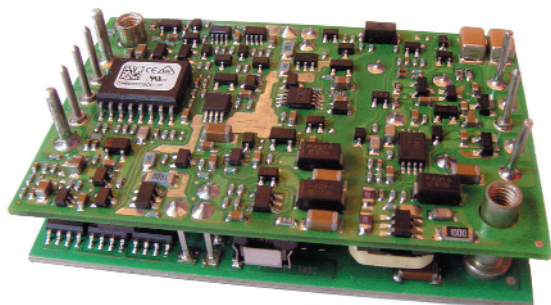


# LAMBDA iQM/iQN/iQP Series

## 72 - 300W Quarter Brick Converter



- ◆ Standard Quarter Brick Footprint
- ◆ 36-75VDC Input
- ◆ 1.2V 100A - 35V 6A Nominal Outputs
- ◆ Through Hole Mounting
- ◆ Low 12.7mm Profile
- ◆ 1500VDC Basic Isolation

**RoHS**

### Features and Benefits

Feature	Benefit
◆ High operating efficiency (up to 92%)	◆ Reduced system heating
◆ Constant switching frequency	◆ Easier system filtering
◆ Baseplate	◆ Allows for improved thermal management with optional heatsink

### Specifications

ITEMS	MODEL	iQM (iQP)									
		1.2	1.5	1.8	2.5	3.3	5	12	28	35	
Nominal Output Voltage	VDC										
Input Voltage Range	VDC	36 - 75									
Input Current (max)	A	2.8 - 10.5 Amps model dependent									
Output Voltage Tolerance	VDC	1.16 - 1.24	1.45 - 1.55	1.74 - 1.86	2.42 - 2.58	3.20 - 3.40	4.85 - 5.15	11.6 - 12.4	27.44 - 28.56	34.48 - 35.53	
Ripple & Noise (max)(pk to pk)	mV	80 <sup>1</sup> (50 <sup>5</sup> )	90 <sup>1</sup> (100 <sup>5</sup> )	90 <sup>1</sup> (80 <sup>5</sup> )	95 <sup>1</sup> (75 <sup>5</sup> )	100 <sup>1</sup> (80 <sup>5</sup> )	100 <sup>1</sup>	120 <sup>2</sup> (200 <sup>5</sup> )	200 <sup>3</sup>	250 <sup>4</sup>	
Line Regulation (max)	mV	5				6.6	8 (10)	24	56	100	
Load Regulation (max)	mV	5	7	6	5	6.6	10	24	N/A	N/A	
Overload Protection (typ)	%	Inception- 108-117% of rated output; Short circuit auto recovery									
Overvoltage Protection	VDC	1.5	1.83	2.25	3.1	4.1	6.1	14.5	33.6	39.7	
Remote Sense	-	Yes									
Remote On / Off	-	Positive or Negative Logic available, see Feature Set									
Temperature (operating)	°C	-40-120(121)			-40-117(121)			-40-115(119)	-40-117(116)	40-115	-40-119
Temperature (storage)	°C	-55 to 125									
Humidity (operating)	-	20-95% RH Non condensing									
Humidity (storage)	-	10-95% RH Non condensing									
Cooling	-	Convection or forced air									
Isolation Voltage	VDC	1500V Input to output & base plate, 500V Output to base plate									
Vibration (non operating)	-	5 to 50Hz @ 0.5g (4.9m/s <sup>2</sup> ), and 50 to 500Hz @ 1.5g (14.7m/s <sup>2</sup> ) per Bellcore TR-EOP-000063-5.4.4									
Shock	-	196.1m/s <sup>2</sup>									
Safety Agency Approvals	-	UL60950 (US and Canada), VDE0805 (IEC60950), CB scheme (IEC60950), CE Mark (LVD)									
Weight (max)	g	60									
Size	mm	57.9 x 36.8 x 12.7									
Warranty	-	3 years									

Notes: See website for detailed specifications

- (1) Measured across 47µF + 1µF + 0.1µF ceramic caps
- (2) Measured across 47µF + 1µF + 0.1µF ceramic caps + 470µF Al electrolytic
- (3) Measured across 40µF + 1µF + 0.1µF ceramic caps + 2X220µF Al electrolytic
- (4) Measured across 47µF + 1µF + 0.1µF ceramic caps + 68µF Al electrolytic
- (5) Measured across 47µF + 1µF + 0.1µF ceramic caps + 1000µF Al electrolytic

**onsolate**

# LAMBDA iQM/iQN/iQP Series

## Model Selector

Model	Voltage (V)	Adjust Range (V)	Max. Curr. (A)	Max. Output Power (W)	Efficiency at Full Load (%)
iQM48060A012V-001-R	1.2	0.96 - 1.32	60	72	80.5
iQP48100A012V-001-R	1.2	0.96 - 1.32	100	120	80
iQM48060A015V-001-R	1.5	1.2 - 1.65	60	90	83.5
iQP48090A015V-001-R	1.5	1.2 - 1.65	90	135	84
iQM48060A018V-001-R	1.8	1.44 - 1.98	60	108	85
iQP48085A018V-001-R	1.8	1.44 - 1.98	85	153	86.5
iQM48050A025V-001-R	2.5	2.0 - 2.75	50	125	88.5
iQM48060A025V-001-R	2.5	2.0 - 2.75	60	150	87.5
IQP48080A025V-001-R	2.5	2.0 - 2.75	80	200	89
iQM48035A033V-001-R	3.3	2.64 - 3.63	35	115.5	91.8
iQM48050A033V-001-R	3.3	2.64 - 3.63	50	165	90.5
iQP48070A033V-001-R	3.3	2.64 - 3.63	70	231	91.5
iQM48033A050V-001-R	5	4.0 - 5.5	33	165	91
iQP48050A050V-001-R	5	4.0 - 5.5	50	250	91.5
iQM48017A120V-001-R	12	9.6 - 13.2	17	204	90.5
IQP48021A120V-001-R	12	9.6 - 13.2	21	252	92
iQP48025A120V-001-R	12	9.6 - 13.2	25	300	91.5
iQN48007A280V-001-R	28	16.8 - 30.8	7	196	92
iQN48006A350V-001-R	35	17 - 35	6	210	90

## Pinout

PIN	Function (iQM, iQN)	Function (iQP)
1	Vin (+)	Vin (+)
2	On / Off	On / Off
3	Vin (-)	Vin (-)
4	Vout (-)	Vout (-)
5	Sense (-)	Vout (-)
6	Trim	Sense (-)
7	Sense (+)	Trim
8	Vout (+)	Sense (+)
9	no pin	Vout (+)
10	no pin	Vout (+)

## Feature Set

Feature Set	On / Off Logic	OVP	Pin Length
00	Positive	Latch	0.145
01*	Negative	Latch	0.145
02	Positive	Latch	0.110
03	Negative	Latch	0.110
04	Positive	Latch	0.200
05**	Negative	Latch	0.200
06	Positive	Non-Latch	0.145
07	Negative	Non-Latch	0.145
08	Positive	Latch	0.180
09	Negative	Latch	0.180

For Additional Information, please visit  
[www.lambdapower.com/products/iqm-iqn-series.htm](http://www.lambdapower.com/products/iqm-iqn-series.htm)

\* Preferred feature set for iQM/iQN

\*\* Preferred feature set for iQP

Model Number Example: iQM48050A033V-001-R

Model Number Example: iQP48050A05V-005-R

## Other Lambda DC-DC Products

CC-E	1.5-12W, 1 to 2 Outputs, 5 to 48VDC Input
PX	10-40W, 1 to 3 Outputs, 12 to 48VDC Input
iPB	15-35W, 1.5-5V Output, 36-75VDC Input, Pico Brick
iSA	30-78W, 1.2-12V Output, 36-75VDC Input, Sixteenth Bricks
iEA	30-78W, 1.2-28V Output, 36-75VDC Input, Eighth Brick DC-DC
PAE50/100	36-100W, 1.9-5V Output, 36-75VDC Input, Eighth Brick DC-DC
iEB	150W, 12V Output, 42-56V Input, Eighth Brick Intermediate Bus DC-DC
iQD	300W, 12V Output, 42-53VDC Input, Quarter Brick Intermediate Bus DC-DC
iQB	100W, 1.2-12V Output, 24 to 48VDC Input, Quarter Brick DC-DC
PAH300/350	300-350W, 12 to 28V Output, 36-75VDC Input, Half Brick DC-DC
PAF	400-700W, 1.8 to 48V output, 24 to 400VDC Input, Full Brick DC-DC
FPS	1kW to 3kW, 24 to 48V Output, AC-DC Front Ends
iAA, iBC, PL	Non Isolated DC-DC Converters