

Converter Specifications

(typical at $T_{BP} = 25^{\circ}\text{C}$, nominal line and 75% load, unless otherwise specified)

PARAMETER	VI-200 E-Grade			VI-200 C-, I-, M-Grade			UNITS	TEST CONDITIONS
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.		
Input Characteristics								
Inrush charge		120x10 ⁻⁶		120x10 ⁻⁶	200x10 ⁻⁶		Coulombs	Nominal line
Input reflected ripple current – pp		10%		10%			I _{IN}	Nominal line, full load
Input ripple rejection		25+20Log($\frac{V_{in}}{V_{out}}$)		30+20Log($\frac{V_{in}}{V_{out}}$)			dB	120 Hz, nominal line
				20+20Log($\frac{V_{in}}{V_{out}}$)			dB	2400 Hz, nominal line
No load power dissipation		1.35	2		1.35	2	Watts	
Output Characteristics								
Setpoint accuracy		1%	2%		0.5%	1%	V _{NOM}	
Load/line regulation			0.5%		0.05%	0.2%	V _{NOM}	LL to HL, 10% to Full Load
Load/line regulation			1%		0.2%	0.5%	V _{NOM}	LL to HL, No Load to 10%
Output temperature drift		0.02		0.01	0.02		% / °C	Over rated temp.
Long term drift		0.02		0.02			%/1K hours	
Output ripple - pp:								
2V, 3.3V			150 mV		60 mV	100 mV		20 MHz bandwidth
5V			5%		2%	3%		20 MHz bandwidth
10-48V			3%		0.75%	1.5%		20 MHz bandwidth
Trim range ¹		50%	110%		50%	110%		
Total remote sense compensation		0.5		0.5			Volts	0.25V max. neg. leg
OVP set point		125% ²		115%	125% ²	135%	V _{NOM}	Recycle power
Current limit		105%	135%	105%		125%	I _{NOM}	Automatic restart
Short circuit current ³		20%	140%	20%		130%	I _{NOM}	
Control Pin Characteristics								
Gate out impedance		50		50			Ohms	
Gate in impedance		10 ³		10 ³			Ohms	
Gate in open circuit voltage		6		6			Volts	Use open collector
Gate in low threshold		0.65		0.65			Volts	
Gate in low current			6			6	mA	
Power sharing accuracy		0.95	1.05	0.95		1.05		
Dielectric Withstand Characteristics								
Input to output		3,000		3,000			V _{RMS}	Baseplate earthed
Output to baseplate		500		500			V _{RMS}	
Input to baseplate		1,500		1,500			V _{RMS}	
Thermal Characteristics								
Efficiency		78-88%		80-90%				
Baseplate to sink		0.2		0.2			°C/Watt	With Vicor P/N 01777
Thermal shutdown ⁴ (Drivers only)		90	95	105	90	95	105	°C
								Cool and recycle power to restart
Mechanical Specifications								
Weight		6.0 (170)		6.0 (170)			Ounces (Grams)	

¹ 10V, 12V and 15V outputs, standard trim range ±10%. Consult factory for wider trim range.

² 131% nominal for booster modules.

³ Output voltages of 3.3V or 5V incorporate foldback current limiting; all other outputs provide constant current limiting.

⁴ No overtemp protection in booster modules.