Military DC-DC Converters

Series LFD/LMD Single and Series LFD/LMD Dual

Isolated Regulated 75 Watts, Wide Input Range/200-380 VDC
Fully Regulated, Short Circuit Protected
Parallel Operation Available

Features:

- Dual isolated outputs
- Short circuit protection
- Input voltage protection
- Thermal, over temp. shutdown
- Line regulation
- Load regulation
- No external components required
- Hi density, hi efficiency design
- Remote shutdown
- Trim capabilities
- Fixed frequency-100 Khtz

46 Standard Models For all variations, call factory.
For Parallel Operation: Add suffix "P"
(i.e. LFD/LMD5SP) Consult factory to optimize for your application.

Series LFD : (-40° C to +85° C Operating Temperature)
Series LMD : (-55° C to +85° C Operating Temperature)

Typical Characteristics:

Frequency: 100 Khtz
Base plate: Max. +85° C
Operating temperature: See thermal chart: -40° C to +85° C base plate, -55° C to +85° C base plate.
Test conditions: 25° C ambient
Isolation Base Input: 2121 VDC
Isolation Input Output: 4242 VDC
Isolation Output to Base: 1000 VDC
Storage temperature: -55° C to +105° C

Surge: Meets MIL STD 704
Vibration: Meets MIL STD 202 Method 204 Cond. D
Humidity: Meets MIL STD 202 Method 106
Shock: Meets MIL STD 202 Method 213 Cond. I
Altitude: Meets MIL STD 202 Method 105 Cond. D
Selected MIL STD 883 Options also Available
Stabilization Bake: MIL STD 883 Method 1008 24 Hrs TA=125° C
Burn In: MIL STD 883 Method 1015 160 Hrs at 90° C, case
Temperature Cycle: MIL STD 883 -55°C to +105°C Method 1010 Cond. B

The PICO LFD and LMD Series of high power DC-DC Converters, allow a wide input voltage of 200-380 VDC, while maintaining a regulated output. They are fully safeguarded for over voltage, over temperature and continuous short circuit protection.

The availability of Dual Isolated outputs, small size, and the capability of parallel operation as standard features should reduce your design and component costs, while the fixed frequency operation helps parallel connections for higher power requirements.

This high density unit is assembled in the USA with PICO quality and component selection, allowing it to meet the most stringent commercial requirements.

Series LFD/LMD Single * 75 Watts * Input 200-380 VDC

Input Volt. Range (V DC)	Outp. Volt. (V DC)	Max. Output Power * (W)	EFF. Full Load Typical ** (%)	Max. Load Regulation (%)**		Max. Line Regulation At Full Load (%)		Output Voltage Ripple (Full Load) 1-1MHz BW (MV P-P)	Outp. Volt. Toler. ** (± %)	Series LFD Single (-40° C to +85° C)		Series LMD Single (-55° C to +85° C)	
				10-50%	50-100%	200-300V	300-380V			Pico Part Number	Price (US $)	Pico Part Number	Price (US $)
200-380	3.3	30	73	1.50	1.50	1.00	1.00	50	2	LFD3.3S	357.41	LMD3.3S	487.38
200-380	5	50	80	1.25	1.25	1.00	1.00	50	1.5	LFD5S	357.41	LMD5S	487.38
200-380	5.2	50	80	1.25	1.25	1.00	1.00	50	1.5	LFD5.2S	357.41	LMD5.2S	487.38
200-380	9	65	84	1.25	1.25	0.75	0.75	50	1	LFD9S	357.41	LMD9S	487.38
200-380	12	75	84	1.00	1.00	0.75	0.75	50	1	LFD12S	357.41	LMD12S	487.38
200-380	15	75	84	1.00	1.00	0.75	0.75	50	1	LFD15S	357.41	LMD15S	487.38
200-380	24	75	85	0.75	0.75	0.50	0.50	50	0.5	LFD24S	357.41	LMD24S	487.38

200-380	28	75	86	0.50	0.50	0.50	0.50	50	0.5	LFD28S	357.41	LMD28S	487.38
200-380	48	75	85	0.50	0.50	0.50	0.50	50	0.5	LFD48S	357.41	LMD48S	487.38
200-380	100	75	85	0.50	0.50	0.50	0.50	100	0.5	LFD100S	536.12	LMD100S	731.08

10% Minimum load required at all times.
* Using proper thermal management, maximum temp. of +85° C (case)
** Reading taken at nominal 300 VDC input

Series LFD/LMD Dual * 75 Watts * Input 200-380 VDC

Input Volt. Range (V DC)	Outp. Volt. (V DC)	Max. Output Power * (W)	EFF. Full Load Typical ** (%)	Max. Load Regulation (%)**		Max. Line Regulation At Full Load (%)		Output Voltage Ripple (Full Load) 1-1MHz BW (MV P-P)	Outp. Volt. Toler. ** (± %)	Series LFD Dual (-40° C to +85° C)		Series LMD Dual (-55° C to +85° C)	
				10-50%	50-100%	200-300V	300-380V			Pico Part Number	Price (US $)	Pico Part Number	Price (US $)
200-380	5	50	80	1.25	1.25	1	1	50	1.5	LFD5D	482.09	LMD5D	657.40
200-380	9	65	84	1.25	1.25	0.75	0.75	50	1	LFD9D	482.09	LMD9D	657.40
200-380	12	75	84	1	1	0.75	0.75	50	1	LFD12D	482.09	LMD12D	657.40
200-380	15	75	84	1	1	0.5	0.5	50	1	LFD15D	482.09	LMD15D	657.40
200-380	24	75	85	0.75	0.75	0.5	0.5	50	0.5	LFD24D	482.09	LMD24D	657.40
200-380	28	75	86	0.5	0.5	0.5	0.5	50	0.5	LFD28D	482.09	LMD28D	657.40
200-380	48	75	85	0.5	0.5	0.5	0.5	50	0.5	LFD48D	482.09	LMD48D	657.40

10% Minimum load required at all times.
* Using proper thermal management, maximum temp. of +85° C (case)
** Reading taken at nominal 300 VDC input

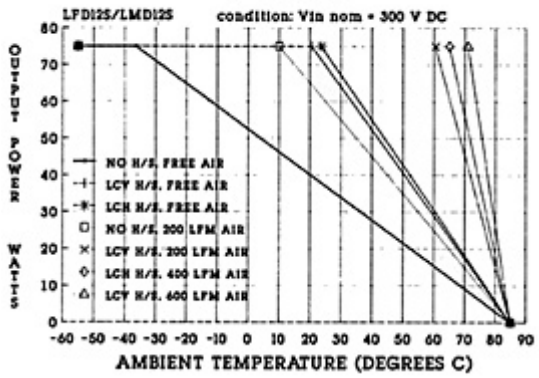
****HIGH VOLTAGE SERIES LFD/LMD
TO 250 VDC - 50 WATTS - INPUT 200-380 VDC

INPUT VOLTAGE RANGE (VDC)	OUTPUT VOLTAGE (VDC)	MAX. OUTPUT POWER (W)*	EFF. @ OUTPUT LOAD TYP. (%)**	MAX. LOAD REGULATION (%)**		MAX. LINE REGULATION AT FULL LOAD (%)		OUTPUT VOLTAGE RIPPLE FULL LOAD 1-1 MHz BW (%)	OUTPUT VOLTAGE Tolerance (±%)**	SERIES LFD SINGLE (-40°C to +85°C)		SERIES LMD SINGLE (-55°C TO +85°C)	
				20-50%	50-100%	200-300V	300-380V			PICO PART Number	PRICE (US $)	PICO PART Number	PRICE (US $)
200-380	125	50	85	0.5	0.5	0.3	0.3	1	0.5	LFD125S	536.12	LMD125S	731.08
200-380	150	50	85	0.5	0.5	0.3	0.3	1	0.5	LFD150S	536.12	LMD150S	731.08
200-380	175	50	85	0.5	0.5	0.3	0.3	1	0.5	LFD175S	536.12	LMD175S	731.08
200-380	200	50	85	0.5	0.5	0.3	0.3	1	0.5	LFD200S	714.83	LMD200S	974.77
200-380	225	50	85	0.5	0.5	0.3	0.3	1	0.5	LFD225S	714.83	LMD225S	974.77
200-380	250	50	85	0.5	0.5	0.3	0.3	1	0.5	LFD250S	714.83	LMD250S	974.77

10% Minimum load required at all times
*Using proper thermal management maximum temp of +85°C (case)
**Reading taken at nominal 300 VDC input
****UL approval recognition pending

VIEW HEAT SINKS GO TO APPLICATION NOTES GO TO MECHANICAL CONFIGURATION

Full thermal analysis can be determined using application notes on page 124. By using the efficiency and thermal resistance of your desired unit to the formula you can complete your evaluation. The curves below were generated for Part #LFD12S/LMD12S using Application Notes Please consult factory with any questions.



Larger Version of Graph

For immediate engineering assistance or to place an order: **Call Toll Free: 800-431-1064**

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