

## WLEDEVM-260 WLED Load Board

The WLEDEVM-260 load board contains 8 white light emitting diode (WLED) banks/strings which contain either 10 or 12 WLEDs as selected by the odd numbered jumpers (JP1, JP3, etc.). The even numbered jumpers (JP2, JP4, etc.) can be used to insert a current meter, or to remove the WLEDs from the circuit. The test points (TP1-TP89) can be used to measure the voltage drops between WLEDs and/or short out WLEDs. J1 connects to the 14-pin ribbon cable provided. The TPS6118xEVMs have the matching header for the ribbon cable, and thus can be used to power the WLEDs.

**WARNING**

**This EVM has several white LEDs that shine very bright. Protective eye wear and/or the provided dark plastic diffuser to cover the white LEDs is recommended.**

### HPA260A PCB

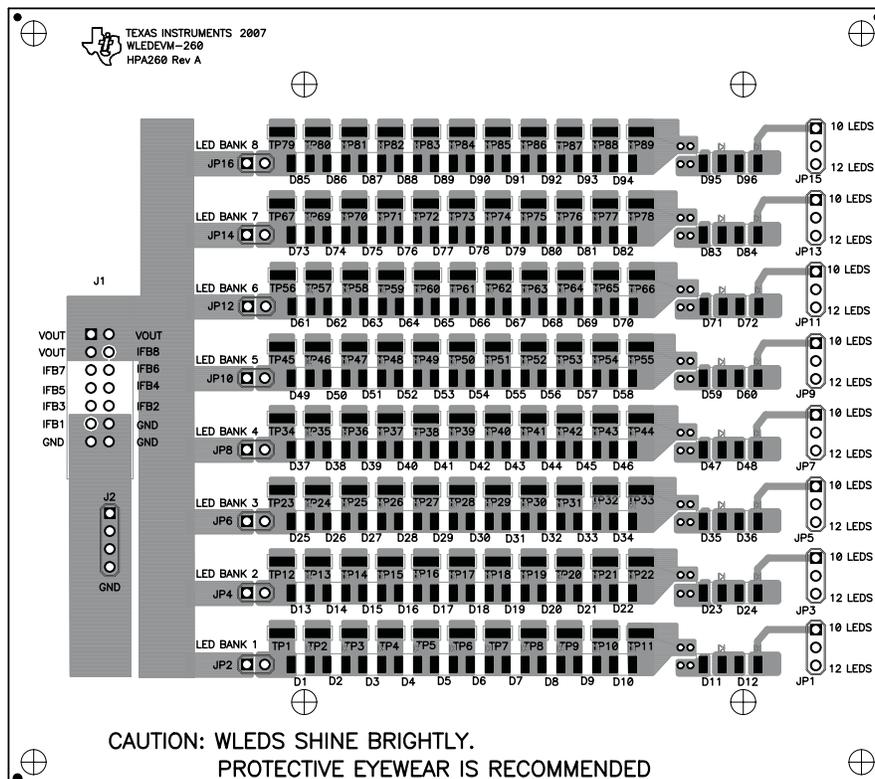


Figure 1.

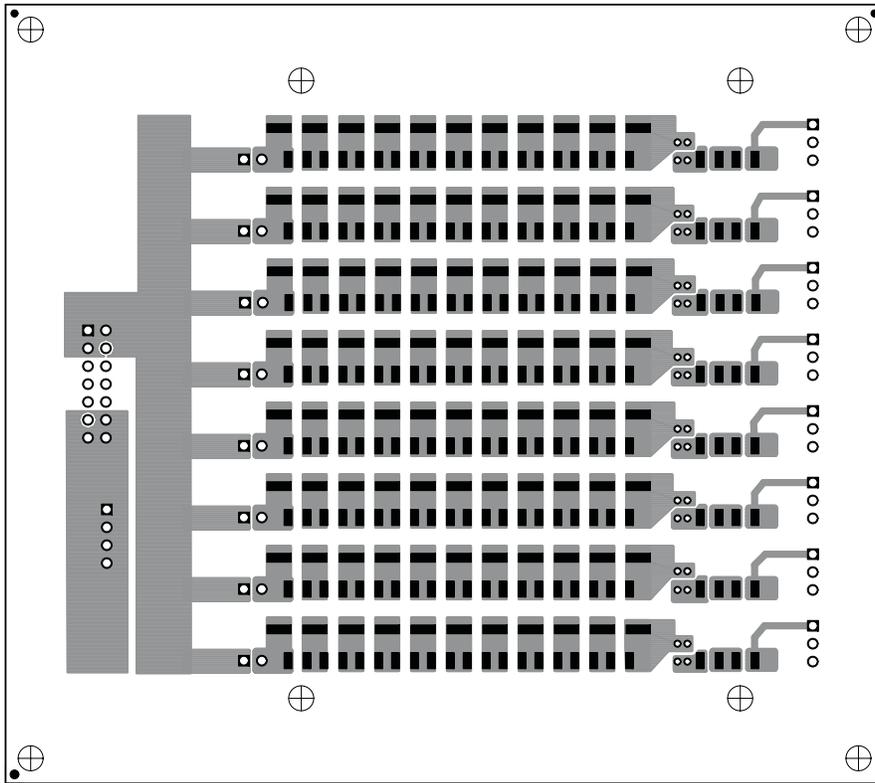


Figure 2.

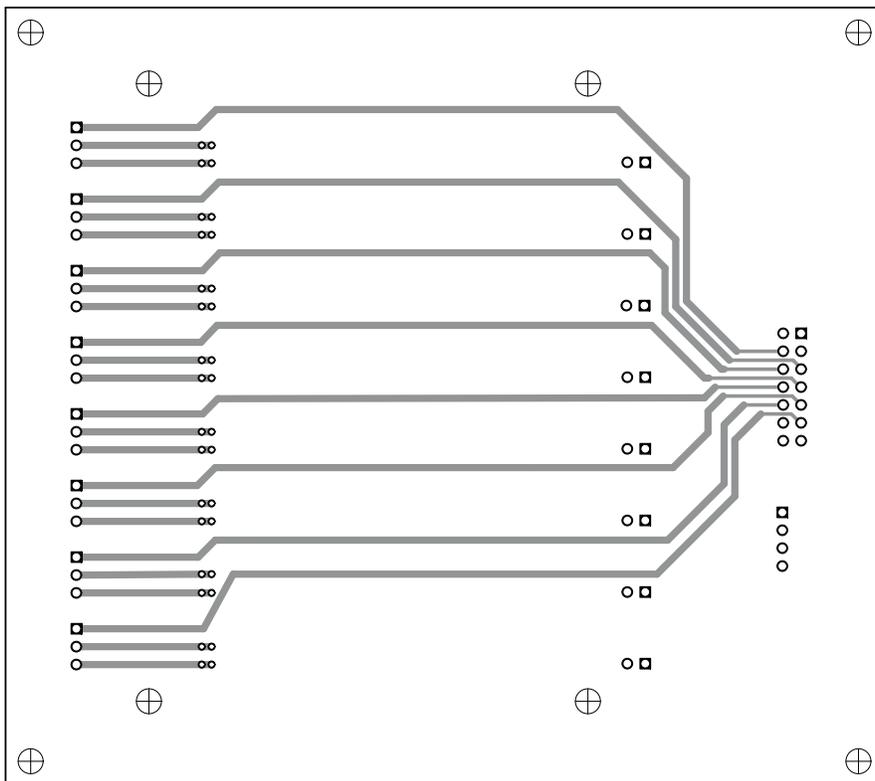
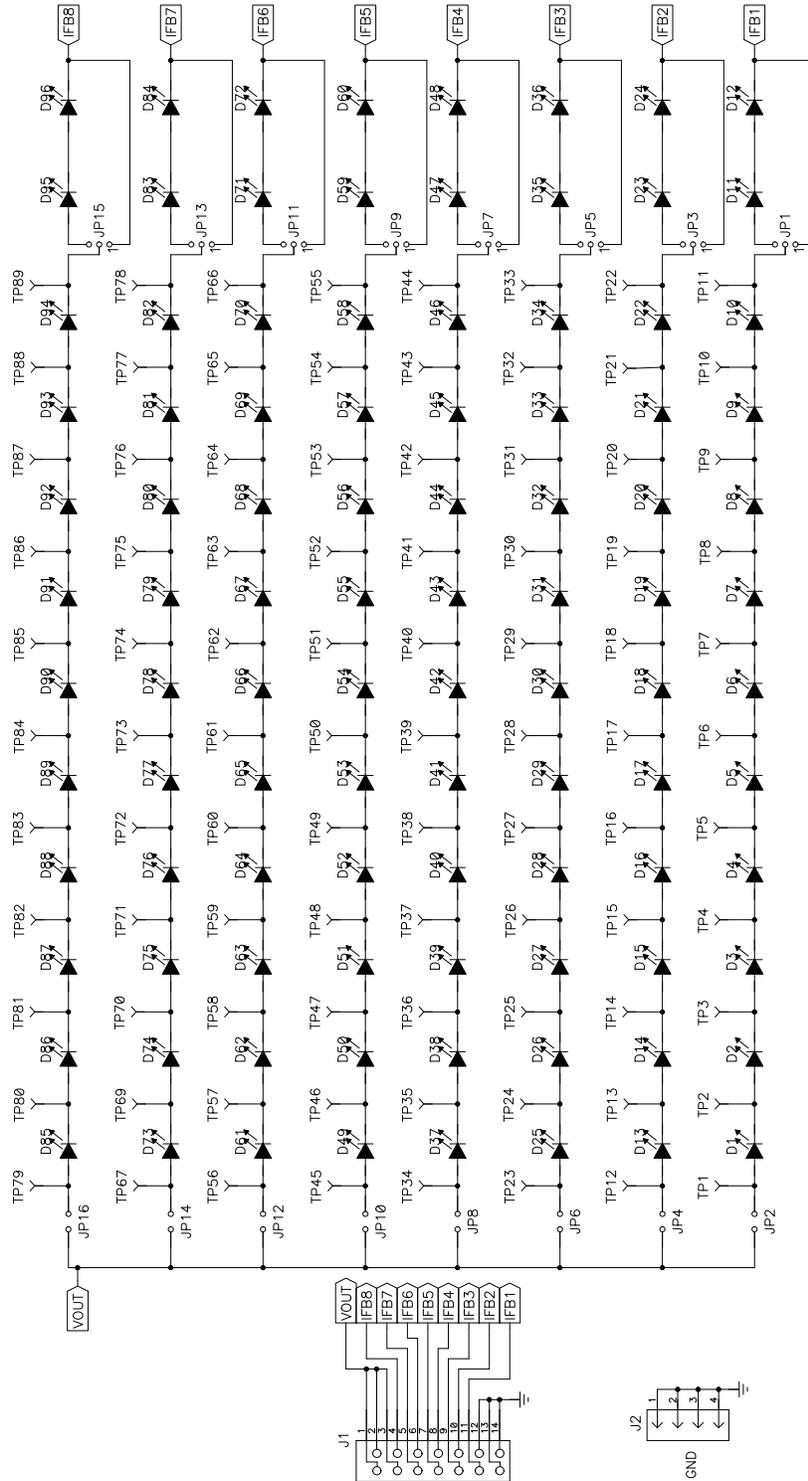


Figure 3.

# 1 HPA260A Schematic



**2 Bill of Materials**
**Table 1. HPA260A BOM**

Count	RefDes	Value	Description	Size	Part Number	MFR
96	D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14, D15, D16, D17, D18, D19, D20, D21, D22, D23, D24, D25, D26, D27, D28, D29, D30, D31, D32, D33, D34, D35, D36, D37, D38, D39, D40, D41, D42, D43, D44, D45, D46, D47, D48, D49, D50, D51, D52, D53, D54, D55, D56, D57, D58, D59, D60, D61, D62, D63, D64, D65, D66, D67, D68, D69, D70, D71, D72, D73, D74, D75, D76, D77, D78, D79, D80, D81, D82, D83, D84, D85, D86, D87, D88, D89, D90, D91, D92, D93, D94, D95, D96	NSSW100CT	Diode, LED, White	0.079 × 0.118 inch	NSSW100CT	Nichia
1	J1	2514-6002UB	Connector, Male Straight 2x7 pin, 100mil spacing, 4 Wall	0.100 inch × 2X7	2514-6002UB	3M
1	J2	PTC36SAAN	Header, Male 4 pin, 100mil spacing, (36-pin strip)	0.100 inch × 4	PTC36SAAN	Sullins
8	JP1, JP3, JP5, JP7, JP9, JP11, JP13, JP15	PTC36SAAN	Header, 3-pin, 100mil spacing, (36-pin strip)	0.100 inch × 3	PTC36SAAN	Sullins
8	JP2, JP4, JP6, JP8, JP10, JP12, JP14, JP16	PTC36SAAN	Header, 2-pin, 100mil spacing, (36-pin strip)	0.100 inch × 2	PTC36SAAN	Sullins
88	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP13, TP14, TP15, TP16, TP17, TP18, TP19, TP20, TP21, TP22, TP23, TP24, TP25, TP26, TP27, TP28, TP29, TP30, TP31, TP32, TP33, TP34, TP35, TP36, TP37, TP38, TP39, TP40, TP41, TP42, TP43, TP44, TP45, TP46, TP47, TP48, TP49, TP50, TP51, TP52, TP53, TP54, TP55, TP56, TP57, TP58, TP59, TP60, TP61, TP62, TP63, TP64, TP65, TP66, TP67, TP69, TP70, TP71, TP72, TP73, TP74, TP75, TP76, TP77, TP78, TP79, TP80, TP81, TP82, TP83, TP84, TP85, TP86, TP87, TP88, TP89	5015	Test Point, SMT	0.105 × 0.040 inch	5015	Keystone
1	—	M3DDA-1406J-ND	Ribbon Cable, Socket to Socket, 10 pin, Polarized	6 inch	M3DDA-1406J-ND	3M
1	—	MCH001	Plexi-glass, smoked	2.750 × 3.750 × 0.125 THK inch	MCH001	Any
16	--		Shunt, 100 mil, Black	0.1	929950-00	
4	—	883	Nylon space	0.125" tall	883	Keystone Electronics
4	—	NSP-6-8-1	Nylon screw	6-32 × 0.50"	NSP-6-8-1	Richco Plastics
4	—	HN#6-32-01	Nylon hex nut	Jun-32	HN#6-32-01	Richco Plastics
1					HPA260	Any

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It is important to operate this EVM within the input voltage and input current ranges as specified in the table below.

Input Range, $V_I$	Maximum = 36V
Input Current, $I_I$	Maximum = 240 mA (30 mA per bank)

Exceeding the specified input range may cause unexpected operation and/or irreversible damage to the EVM. If there are questions concerning the input range, please contact a TI field representative prior to connecting the input power.

Applying loads outside of the specified output range may result in unintended operation and/or possible permanent damage to the EVM. Please consult the EVM User's Guide prior to connecting any load to the EVM output. If there is uncertainty as to the load specification, please contact a TI field representative.

During normal operation, some circuit components may have case temperatures greater than 85°C. The EVM is designed to operate properly with certain components above 85°C as long as the input and output ranges are maintained. These components include but are not limited to linear regulators, switching transistors, pass transistors, and current sense resistors. These types of devices can be identified using the EVM schematic located in the EVM User's Guide. When placing measurement probes near these devices during operation, please be aware that these devices may be very warm to the touch.

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