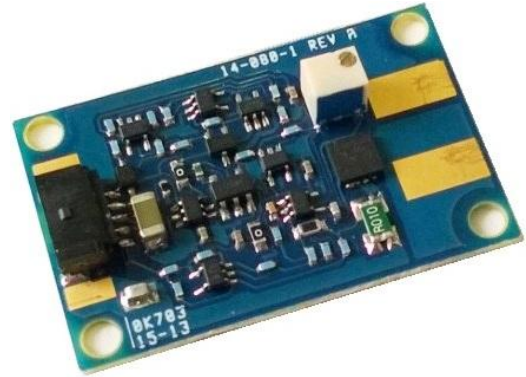


QCW LASER DIODE DRIVER ASSEMBLY

- OUTPUT CURRENT UP TO 10 AMPS QCW
- OUTPUT PULSEWIDTH 1ms TO 10ms
- COMPLIANCE VOLTAGE TO 2.2V
- 3.6VDC INPUT POWER
- COMPACT SIZE ONLY 0.8"x1.25"x0.2"



DESCRIPTION:

The Model 786 is a single channel compact QCW laser diode driver designed to power direct coupled laser diodes. The input is via a 3.6V DC lithium battery or power supply. Current amplitude is adjustable by a potentiometer and solder pad connections are present to connect the laser diode. Output pulsewidth will follow the external trigger input and the pulse can be truncated by an external photodetector input, if present or a 2.4V to 5V logic level.



SPECIFICATION:

PARAMETER	Min.	Typical	Max.	Units
INPUT				
Power	2.7	-	4.3	VDC
Quiescent Current (no pulse output)	-	4.0	12.0	mA
Trigger	2.4	-	5.0	V
Truncation	2.4	-	5.0	V
OUTPUT				
Current	0.125	-	10.0	A
Compliance Voltage	-	-	2.2	V
Pulsewidth	1.0	-	10.0	ms
Repetition Rate	Single Shot	-	10	Hz*
Duty Cycle	0	-	10	%
Average Power (load)	-	2.0	-	W
Risetime	-	-	200	µs
Current Monitor (current output =1mA/A)	0.97	1.0	1.03	mA/A
CONNECTIONS				
Power:	Solder pads for battery + and - connections			
Interface:	5 pin Samtec T1M-5-GF-S-RA			
Laser Diode:	Solder pads for anode and cathode			
SIZE				
0.8" x 1.25" x 0.2"				
WEIGHT				
0.074 oz. (2.1 grams)				

* Limited by maximum output power.

Specifications are subject to change without notice.

APPLICATIONS:

Pumping Er:Glass Lasers for Remote Sensing, Rangefinding, Laser Telemetry and Laser Surveying

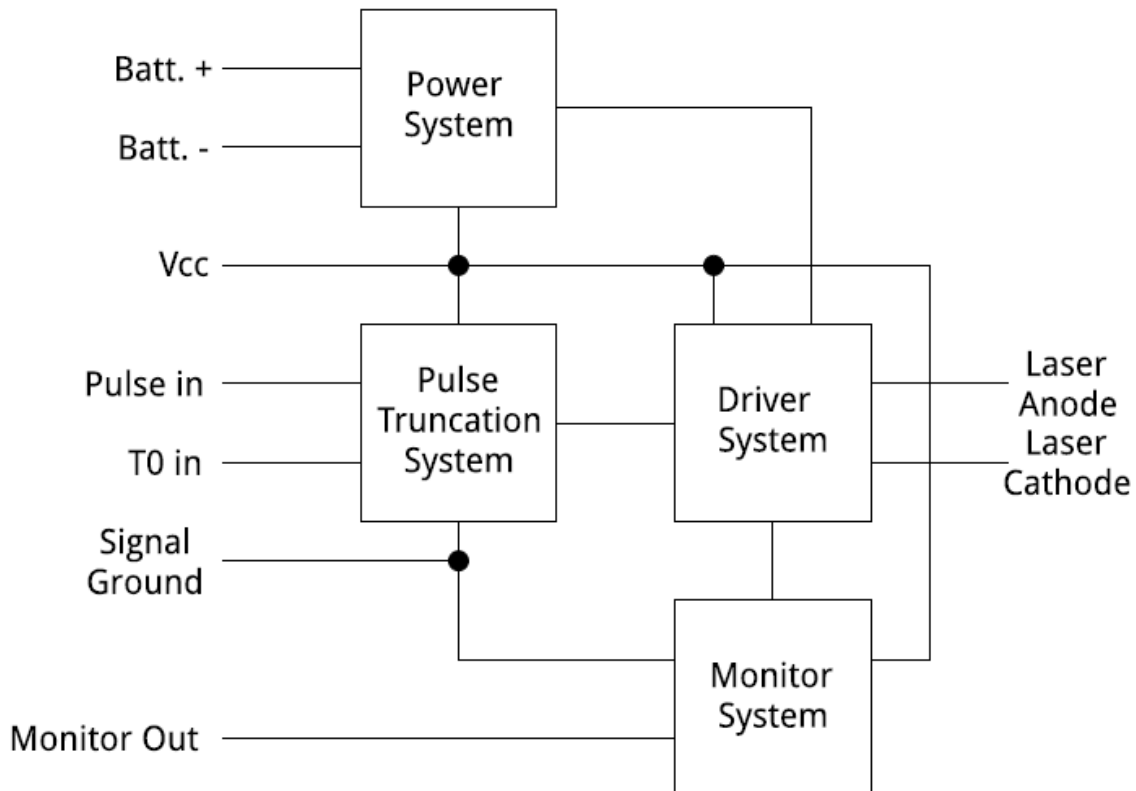
ABSOLUTE MAXIMUM RATINGS:

PARAMETER	Min.	Max.	Units
INPUT			
Power	-	5.5	VDC
OUTPUT			
Driver Power Dissipation (60°C, convection cooling)	-	2.3	W
TEMPERATURE			
Operating:	-40	+60	°C
Storage:	-55	+80	°C
Humidity:		< 95% Non-Condensing	

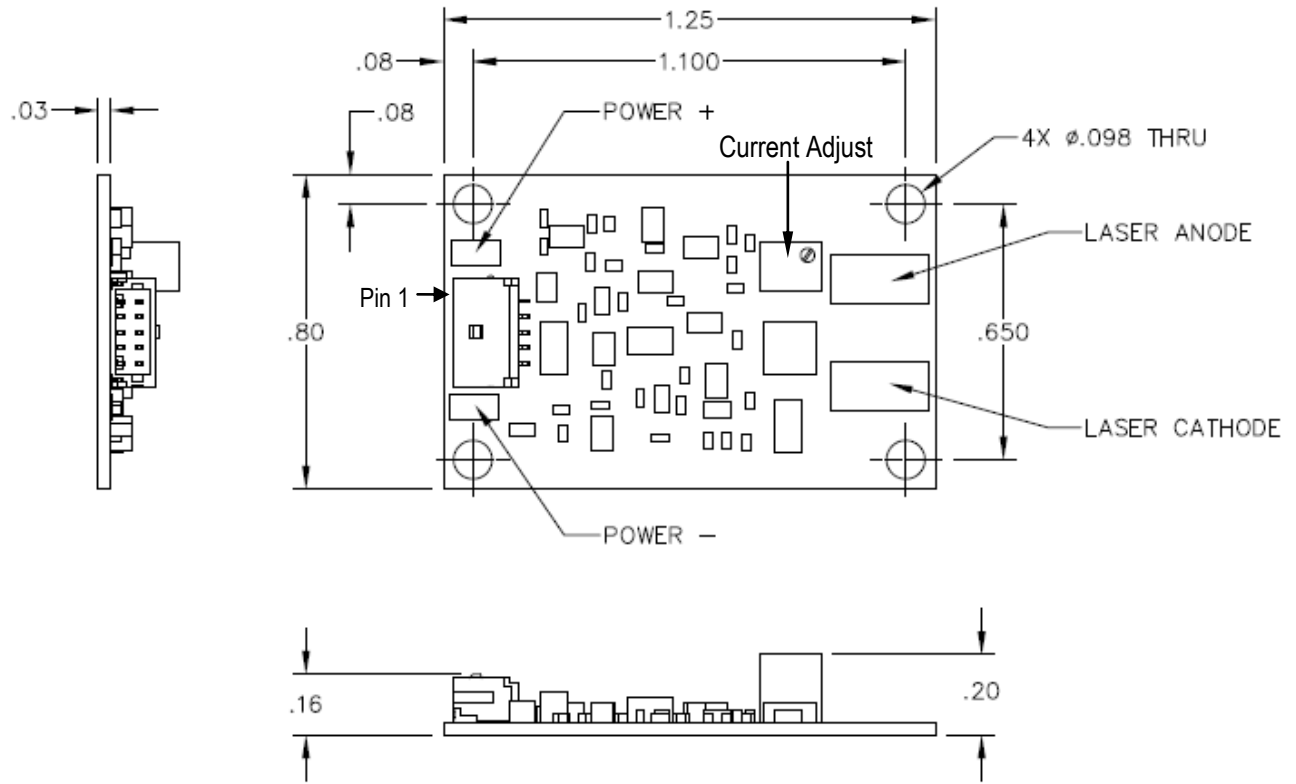
INTERFACE DESCRIPTION

PIN	SIGNAL NAME	DESCRIPTION
1	Photodetector Anode or Electrical T ₀	Output pulse to be truncated by input signal from customer-supplied detector output or 2.4V to 5V logic level.
2	Photodetector Cathode	
3	Trigger Input	TTL compatible, 30uA. Active high, pulsewidth determines output pulsewidth
4	GND	
5	Current Monitor Output	Scale = 1mA/A

BLOCK DIAGRAM



MECHANICAL OUTLINE



15-027 REV -