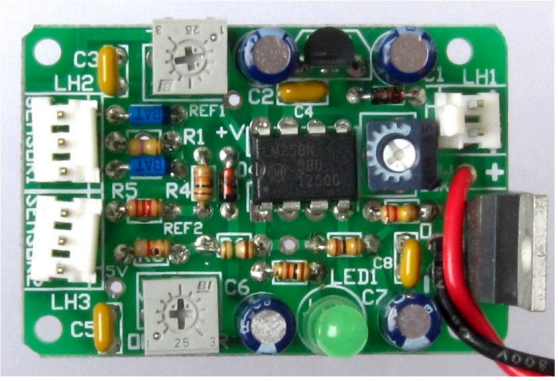
Multi-Purpose LED Light Timer



The PEMLT is an analog timer module for use with proximity, PIR motion and IR sensors to control LED lights. The circuit uses a dual op-amp for triggering and timing and an N-CH MOSFET for LED ON/OFF control. It is suitable for automatic lighting control in staircases, hallways, closets, cabinets, etc. The adjustable, multi-function, comparator-based design allows it to be used for other applications or for integration into other products.

Features:	Benefits:
- Simple comparator-based circuit	- Small size for tight installations
- Adjustable dual timer delay control	- Easy-to-use and setup
- Use standard dual-op amp.	- Simple analog design
- N-CH MOSFET LED switch control	- High reliability
- Accepts various sensor input signals	
- Easy-to-use integrated design	Applications:
- Small and economical	- Staircase, entrances
- Multi-function for DIY projects	- Hallways, corridors
- LED trigger indicator	- Closets, cabinets
- High/Low brightness level setting	- Process control

Technical Specifications: Typical module.

Operating voltage:	12V nominal.
Dimension:	1.77”x1.2” (45x30.5mm). 4x 95mil holes at 1.0x1.5”.
PCB:	1/16” FR4, ROHS, HASL, double-sided, plated holes.
Input signal range (nominal):	5V positive pulse, 0.5-5.0V.
Reference regulator voltage:	5.0V (78L05).
Operating temperature:	-15^{0}C to +85^{0}C
Input current into signal pin:	<5mA, 0.1s pulse.
Maximum current (full ON):	5A, N-CH MOSFET limited.
Maximum current (LOW LUX):	2A, heatsink size limited.
Minimum TIMER1 delay time:	20 second, shorter/longer possible.
Minimum TIMER2 delay time:	10 second, shorter/longer possible.
Sensor input:	Sharp proximity distance GP2Y0A, PIR motion sensor. (Do not mount sensors near heat sources or in direct sunlight) Magnetic/mechanical switch.