LPCM Series
Ø 0.17″ (4.32mm) Board Mount, No-Bleed Light Pipe

LPCM Series light pipe features no-bleed performance around the circuit board due to its custom design mounting snap-in base. Low profile, vertical rigid, Fresnel lens light pipe is ideal for a range of applications where light bleed can impact operation.

Applications

- Agriculture
- Audio/Video
- Automation
- Control Panels
- Communications
- Data Centers
- Industrial
- Infrastructure
- IoT

Key Features

- No light bleed — just pure control of where the light goes
- For use with surface mount (SMD) LEDs
- Fresnel lens provides more uniform brightness
- Low profile, flush panel design
- Snap-in PCB mount base (SMD_4) directs the light from the LED directly through the lens with no light bleed around the circuit board
- Optical grade acrylic for maximum light transmission (UL 94-HB)
- Board mount solution optimizes the light pipe and LED compatibility for device design
- The PCB mount is fixed onto a PCB by two press-in lugs in the housing, offering an easy set-up process (SMD_4 sold separately)
- Eliminates light bleeding from one LED to another for multi-LED indicators
- Panel mounting hole size: 0.173″ (4.4mm) to 0.183″ (4.6mm) panel hole diameter without retaining ring (RTN_150) with a panel max thickness of 0.300″
- Optional RTN_150 provides a reliable solution for high-vibration environments and will secure the placement of the light pipe to the panel (RTN_150 sold separately)
- Available in standard lengths from 0.300″ to 1.00″
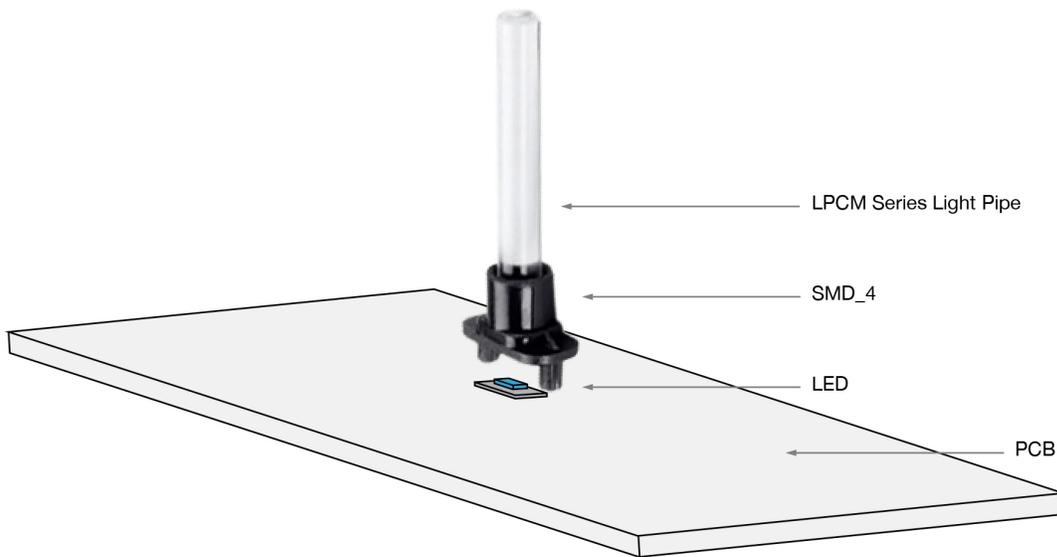- Custom lengths and colors available, contact VCC
- RoHS and REACH Compliant

Board Mount Light Pipes

Board-mount light pipes are designed to attach to the PCB on the same end where the LED is attached. The LED is attached to the PCB and fits inside the light pipe, which is also attached to the board.

Perfect for multi-LED HMIs - the LPCM Series No-Bleed Light Pipe and SMD_4 retainer (sold separately) provide more control over where the light is directed. This benefit is especially helpful when several light pipes are attached to one board in a smaller footprint where light would otherwise bleed from one indicator to another.

Faster, more streamlined assembly - for production efficiencies, the PCB can be printed in one line, and the panel in another. Next, they can be machine-assembled to deliver significant cost and time savings compared to manual processes.

LPCM Series Light Pipe

SMD_4

LED

PCB

Note: VCC's LPCM Series No-Bleed Light Pipe delivers a more streamlined production process than similar available alternatives at about half of the price!
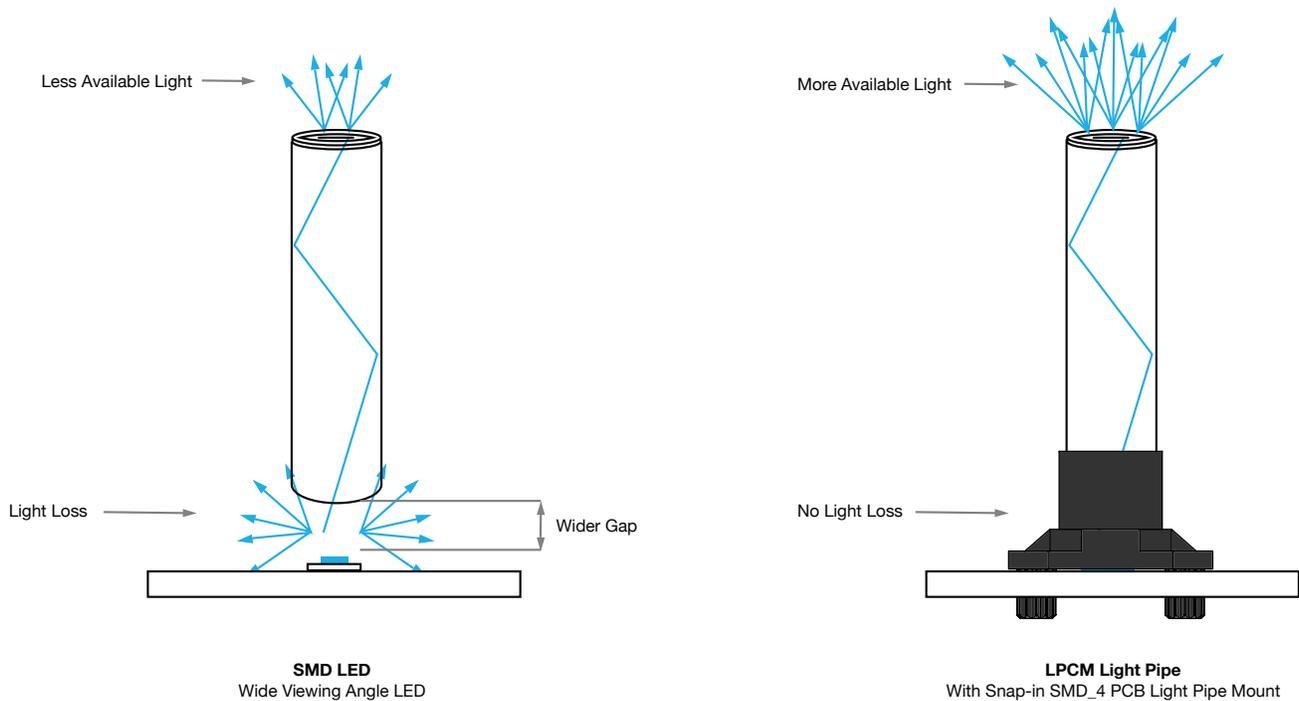
No-Bleed Light Pipe Design

There are several design factors that can influence how much light is lost from the light source (LED) to the light pipe's desired exit point.

Ways to minimize light loss include:

- Using LEDs with narrow viewing angles, so more light shines into the light pipe
- Shortening the distance between the light pipe and the LED itself so less light can escape before entering the light pipe
- Eliminating light loss by removing any gap between the LED and light pipe with the LPCM Series No-Bleed Light Pipe

Less Available Light

Light Loss

Wider Gap

SMD LED
Wide Viewing Angle LED

More Available Light

No Light Loss

LPCM Light Pipe
With Snap-in SMD_4 PCB Light Pipe Mount

Ordering Data

Series		Length Code (Min 030=.300″ / Max 100=1.00″)		Color
LPCM	_	100	_	CTP

030	050	060	070	080	090	100

CTP	Clear

Custom lengths upon request. Contact VCC

Example:
LPCM_100_CTP
LPCM Series 1.00″ Length, Clear Light Pipe

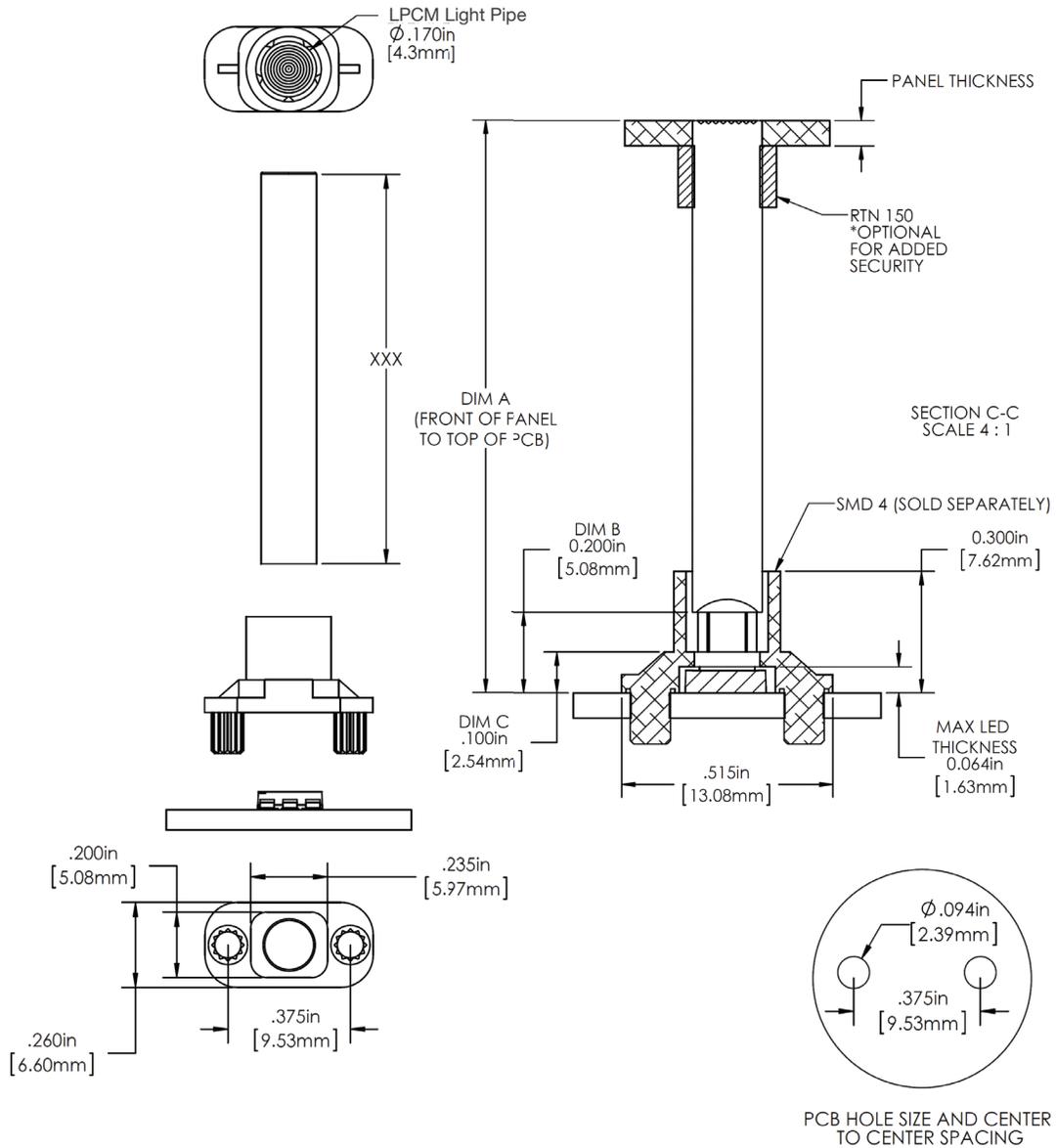### Recommended Retainer and PCB mount for LPCM Series (order separately)

SMD_4

RTN_150

Product Dimensions

LPCM Series

LPCM Light Pipe
Ø.170in
[4.3mm]

PANEL THICKNESS

RTN 150
*OPTIONAL
FOR ADDED
SECURITY

XXX

DIM A
(FRONT OF PANEL
TO TOP OF PCB)

SECTION C-C
SCALE 4 : 1

SMD 4 (SOLD SEPARATELY)

DIM B
0.200in
[5.08mm]

0.300in
[7.62mm]

DIM C
.100in
[2.54mm]

.515in
[13.08mm]

MAX LED
THICKNESS
0.064in
[1.63mm]

.200in
[5.08mm]

.235in
[5.97mm]

.375in
[9.53mm]

.260in
[6.60mm]

Ø.094in
[2.39mm]

.375in
[9.53mm]
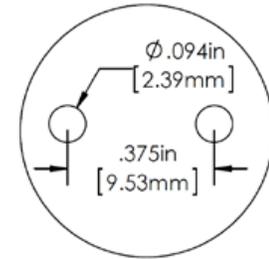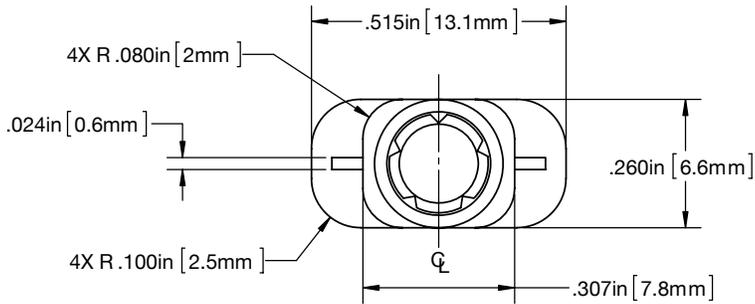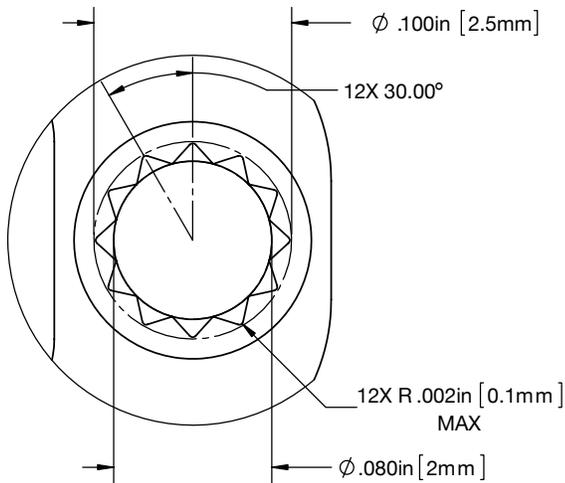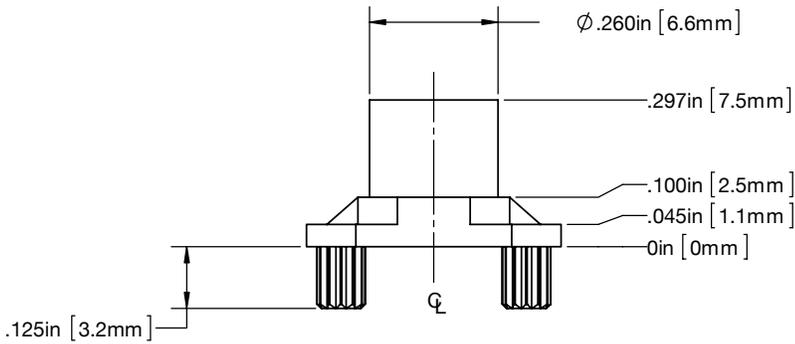
PCB HOLE SIZE AND CENTER
TO CENTER SPACING

Notes:
1. All dimensions are in inches [millimeters]
3. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.

Product Dimensions

SMD_4

.515in [13.1mm]

4X R .080in [2mm]

.024in [0.6mm]

4X R .100in [2.5mm]

.260in [6.6mm]

.307in [7.8mm]

CL

∅ .260in [6.6mm]

.297in [7.5mm]

.100in [2.5mm]
.045in [1.1mm]
0in [0mm]

.125in [3.2mm]

CL

∅ .094in [2.39mm]

.375in [9.53mm]

PCB HOLE SIZE AND CENTER
TO CENTER SPACING

∅ .100in [2.5mm]

12X 30.00°

12X R .002in [0.1mm]
MAX

∅ .080in [2mm]

SECTION A-A

∅ .210in [5.3mm]

50.00°

.100in [2.5mm]

.064in [1.6mm]

0in [0mm]

.010in [0.3mm]

.010in [0.3mm] X 45.00°
CONICAL

2X ∅ .120in [3mm]

Notes:

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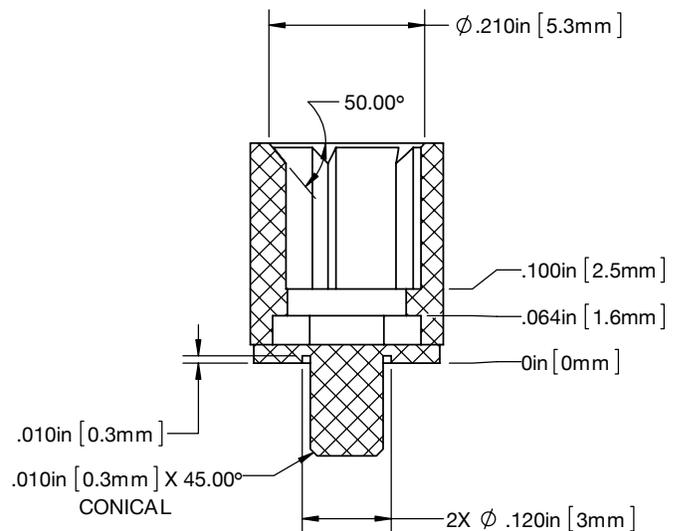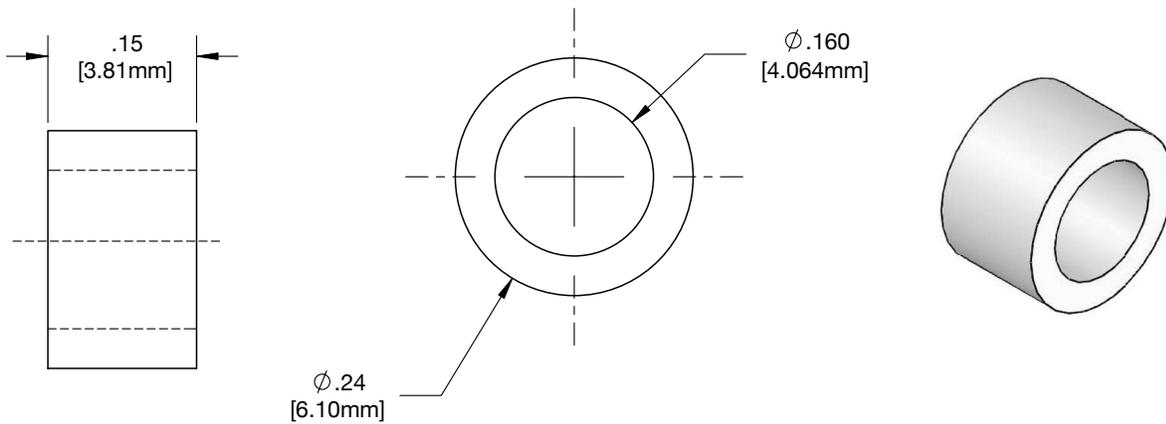
Product Dimensions

RTN_150

.15
[3.81mm]

∅.160
[4.064mm]

∅.24
[6.10mm]

Notes:
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Product Specifications

Materials	
LPCM	Clear optical grade acrylic, UL rating 94-HB
SMD_4	Nylon, (black) UL rating 94-V2
RTN_150	TPE

Installation Specifications		
Mounting Hole		.173″ [4.4mm] min to .183″ [4.6mm] max without retaining ring RTN_150
		.173″ [4.4mm] min to .200″ [5.1mm] max with retaining ring RTN_150
Panel Thickness		Max : DIM A - .300″ [7.62mm]

Compliances and Approvals

REACH COMPLIANCE

RoHS COMPLIANT