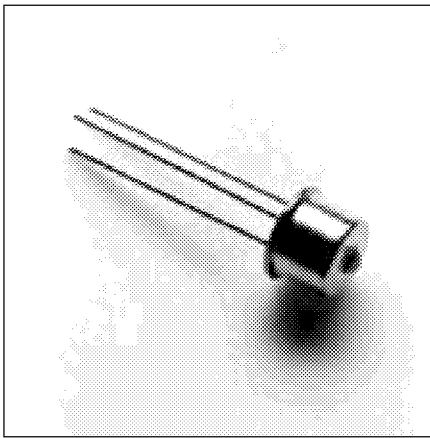


# PRODUCT INFORMATION

1300nm  
1550nm **1A358**  
High-Performance PIN

Datacom, Telecom, General Purpose

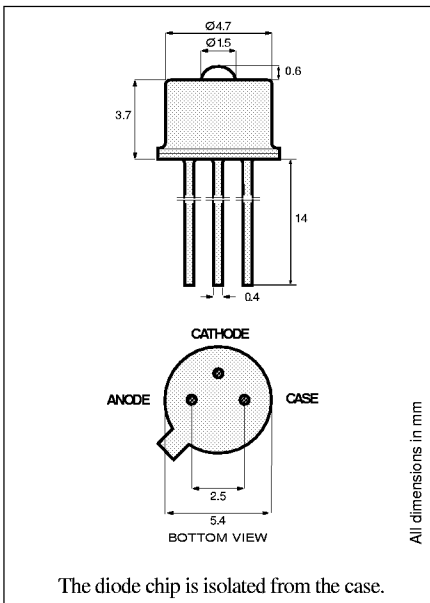
The very high speed and low capacitance of this InGaAs PIN Photodiode makes it ideal for datacom, telecom and general purpose applications. Its double-lens optical system is designed for single-mode fiber as well as for multimode fiber with core diameter up to 62.5µm. And when used in the Pigtail-3A package, the optical return loss is very high.



Optical and Electrical Characteristics (Case Temperature -40 to +85°C)						
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Responsivity (Fig. 1&2) (Table 1)	$R$	0.75 0.85	0.83 1.0		A/W	$\lambda=1300$ nm $\lambda=1550$ nm
Bandwidth	$f_c$	2.5			GHz	$R_L=50\Omega$
Capacitance (Fig. 4)	$C$		0.8	1.2	pF	$f=1$ MHz
Dark Current	$I_d$			3 80	nA	$T_{Case}=25^\circ C$ $T_{Case}=85^\circ C$

Operating Conditions:  $V_R=5V$ . Fiber: Single-mode to multimode 62.5/125µm.

Absolute Maximum Ratings		
PARAMETER	SYMBOL	LIMIT
Storage Temperature	$T_{stg}$	-55 to +125°C
Operating Temperature	$T_{op}$	-55 to +125°C
Reverse Voltage	$V_R$	20V
Soldering Temperature (2mm from the case for 10 sec)	$T_{sld}$	260°C



**TO-46 Package With Lens**

Thermal Characteristics					
PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
Temperature Coefficient - Dark Current	$dI_d/dT_j$		5		%/°C

12634.11 1998-02-04

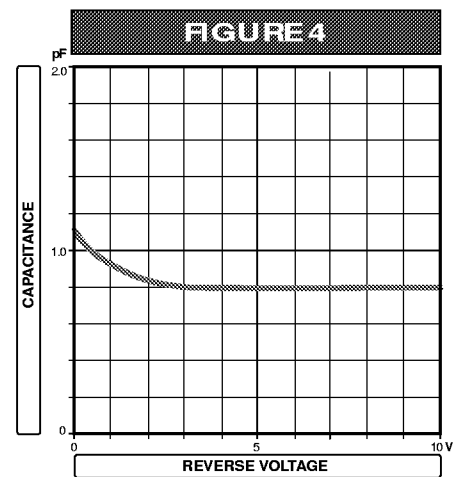
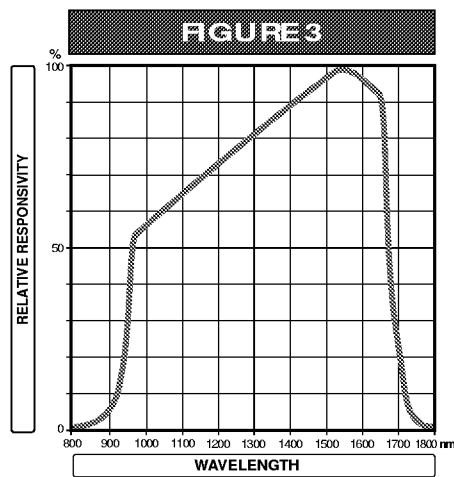
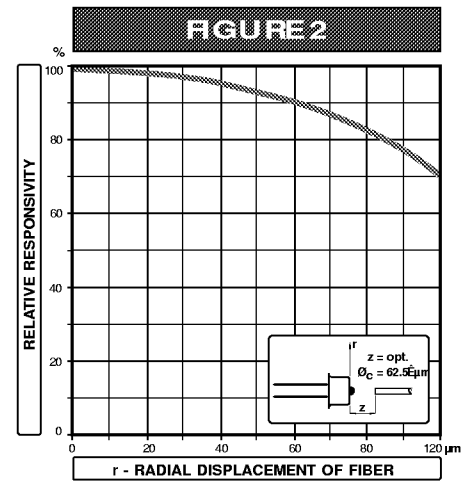
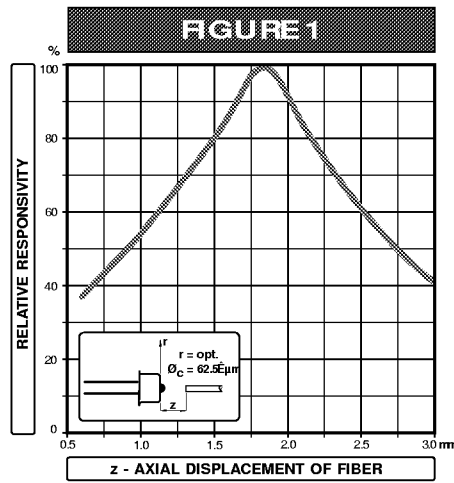


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Asia: Tel (65) 293 5312 Fax (65) 293 8527

Typical Responsivity			
Core Diameter/Cladding Diameter Numerical Aperture			
	10/125 $\mu\text{m}$ 0.11	50/125 $\mu\text{m}$ 0.20	62.5/125 $\mu\text{m}$ 0.275
1300	0.83 A/W	0.83 A/W	0.83 A/W
1550	1.0 A/W	1.0 A/W	1.0 A/W

Table 1

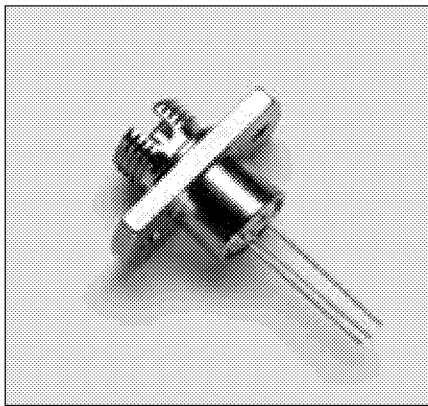


# PRODUCT INFORMATION

## FC-2A Package

## Emitter or Detector in FC Package

Mitel emitters and detectors can be provided in this low-profile FC package. The device is electrically isolated from the FC receptacle to facilitate electrical connection. And optimum fiber-coupled power or responsivity is ensured by active alignment against the fiber.



### Absolute Maximum Ratings

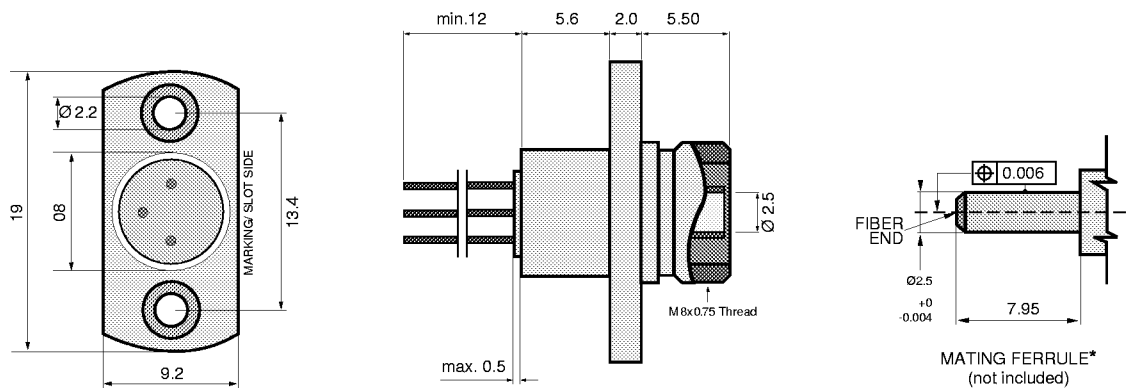
PARAMETER	SYMBOL	LIMIT
Operating & Storage Temperature FC-2A (Note 1)	$T_{stg}, T_{op}$	-40 to +85°C

**Note 1:** Temperature range can be extended to -55° to +125°C on request.

### Thermal Characteristics

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
Thermal Resistance - Infinite Heat Sink (Note 2)	$R_{thcc}$			40	°C/W
Thermal Resistance - No Heat Sink (Note 2)	$R_{thca}$			200	°C/W
Thermal Resistance - On PC Board (Note 2)	$R_{thca}$		80		°C/W

**Note 2:** Add  $R_{thjc}$  for emitter or detector to estimate the total thermal resistance.



All Dimensions in mm

\* The fiber-coupled power/responsivity is guaranteed to meet the LED/PIN data sheet - provided a ferrule meeting this specification is used.

## Mechanical Outline of Diode in FC-2A Housing

105515 1994-09-20



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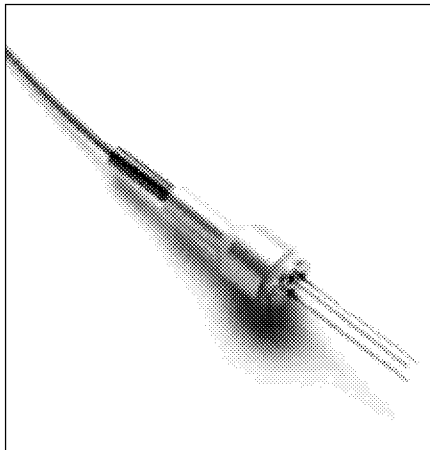
America: Tel 1-800-96MITEL Fax (613) 592-6909  
Asia: Tel (65) 293 5312 Fax (65) 293 8527

# PRODUCT INFORMATION

## Pigtail-3A Package

### Emitter or Detector in Pigtail Package

Mitel emitters and detectors can be provided in this pigtail package with a wide selection of fiber types. The device is electrically isolated from the pigtail receptacle to facilitate electrical connection. And optimum fiber-coupled power or responsivity is ensured by active alignment against the fiber. A special design maximizes the return loss for detectors in this package.



#### Absolute Maximum Ratings

PARAMETER	SYMBOL	LIMIT
Operating & Storage Temperature (Note 1 & 2)	$T_{stg}, T_{op}$	-40 to +85°C

**Note 1:** Temperature range can be extended to -55/+125°C on request.

**Note 2:** Temperature range may be limited by the specification of the fiber.

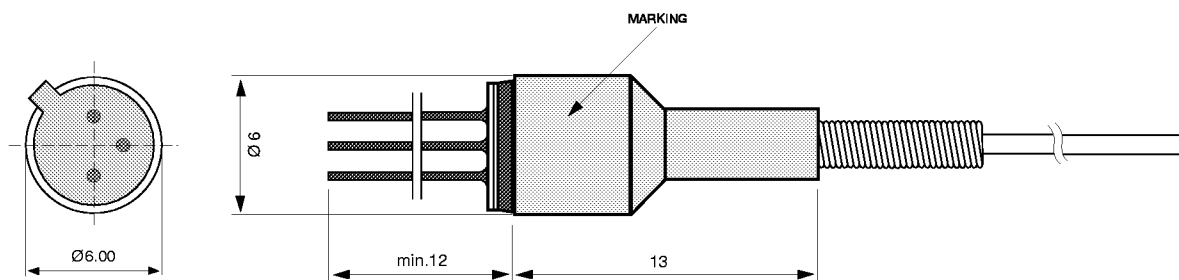
#### Thermal Characteristics

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
Thermal Resistance - Infinite Heat Sink (Note 3)	$R_{thcc}$			25	°C/W
Thermal Resistance - No Heat Sink (Note 3)	$R_{thca}$			250	°C/W
Thermal Resistance - On PC-Board (Note 3)	$R_{thca}$		120		°C/W

**Note 3:** Add  $R_{thjc}$  for LED to estimate the total thermal resistance.

#### Optical Characteristics

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
Return Loss 10/125µm fiber (PIN only)	RL	40	55		dB



All Dimensions in mm

### Mechanical Outline of Diode in PIGTAIL-3A Housing

105429 1997-07-03



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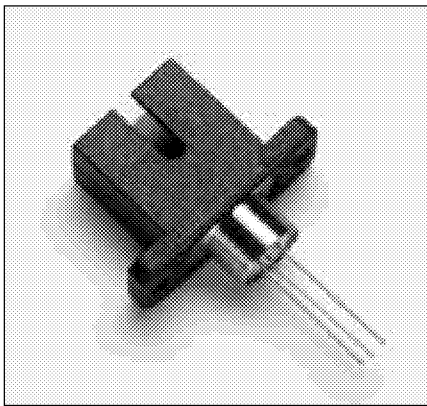
America: Tel 1-800-96MITEL Fax (613) 592-6909  
Asia: Tel (65) 293 5312 Fax (65) 293 8527

# PRODUCT INFORMATION

## SC-2A Package

## Emitter or Detector in SC Package

Mitel emitters and detectors can be provided in this low-profile SC package. The device is electrically isolated from the SC receptacle to facilitate electrical connection. And optimum fiber-coupled power or responsivity is ensured by active alignment against the fiber.



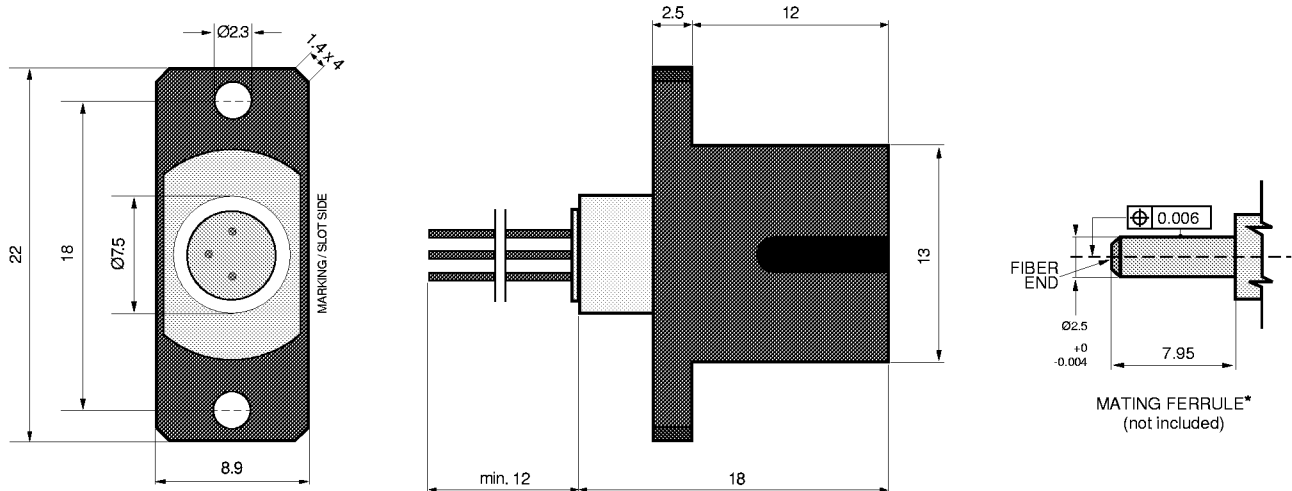
### Absolute Maximum Ratings

PARAMETER	SYMBOL	LIMIT
Operating & Storage Temperature	$T_{stg}, T_{op}$	-40 to +85°C

### Thermal Characteristics

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
Thermal Resistance - Infinite Heat Sink (Note 1)	$R_{thcc}$			40	°C/W
Thermal Resistance - No Heat Sink (Note 1)	$R_{thca}$			200	°C/W
Thermal Resistance - On PC Board (Note 1)	$R_{thca}$		125		°C/W

**Note 1:** Add  $R_{thjc}$  for emitter or detector to estimate the total thermal resistance.



All Dimensions in mm

\* The fiber-coupled power/responsivity is guaranteed to meet the LED/PIN data sheet - provided a ferrule meeting this specification is used.

### Mechanical Outline of Diode in SC-2A Housing

105967 1994-09-20



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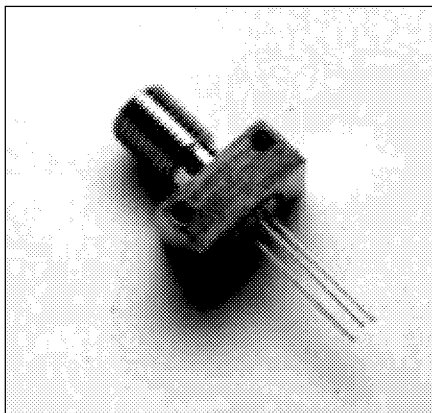
America: Tel 1-800-96MITEL Fax (613) 592-6909  
Asia: Tel (65) 293 5312 Fax (65) 293 8527

# PRODUCT INFORMATION

## SMA-2A Package

### Emitter or Detector in SMA Package

Mitel emitters and detectors can be provided in this low-profile SMA package. The device is electrically isolated from the SMA receptacle to facilitate electrical connection. And optimum fiber-coupled power or responsivity is ensured by active alignment against the fiber.



### Absolute Maximum Ratings

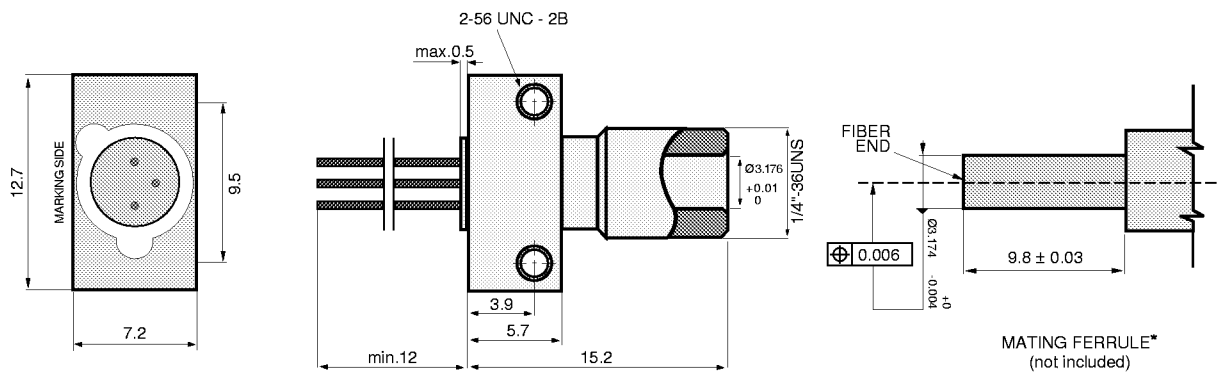
PARAMETER	SYMBOL	LIMIT
Operating & Storage Temperature SMA-2A (Note 1)	$T_{stg}, T_{op}$	-40 to +85°C

**Note 1:** Temperature range can be extended to -55° to +125°C on request.

### Thermal Characteristics

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT
Thermal Resistance - Infinite Heat Sink (Note 2)	$R_{thcc}$			40	°C/W
Thermal Resistance - No Heat Sink (Note 2)	$R_{thca}$			200	°C/W
Thermal Resistance - On PC Board (Note 2)	$R_{thca}$		80		°C/W

**Note 2:** Add  $R_{thjc}$  for emitter or detector to estimate the total thermal resistance.



All Dimensions in mm

\*The fiber-coupled power/responsivity is guaranteed to meet the LED/PIN data sheet - provided a ferrule meeting this specification is used.

### Mechanical Outline of Diode in SMA-2A Housing

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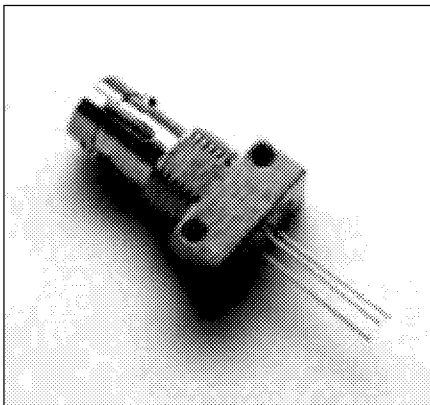
America: Tel 1-800-96MITEL Fax (613) 592-6909  
Asia: Tel (65) 293 5312 Fax (65) 293 8527

# PRODUCT INFORMATION

## ST-2A Package

## Emitter or Detector in ST® Package

Mitel emitters and detectors can be provided in this low-profile ST® package. The device is electrically isolated from the ST® receptacle to facilitate electrical connection. And optimum fiber-coupled power or responsivity is ensured by active alignment against the fiber.



### Absolute Maximum Ratings

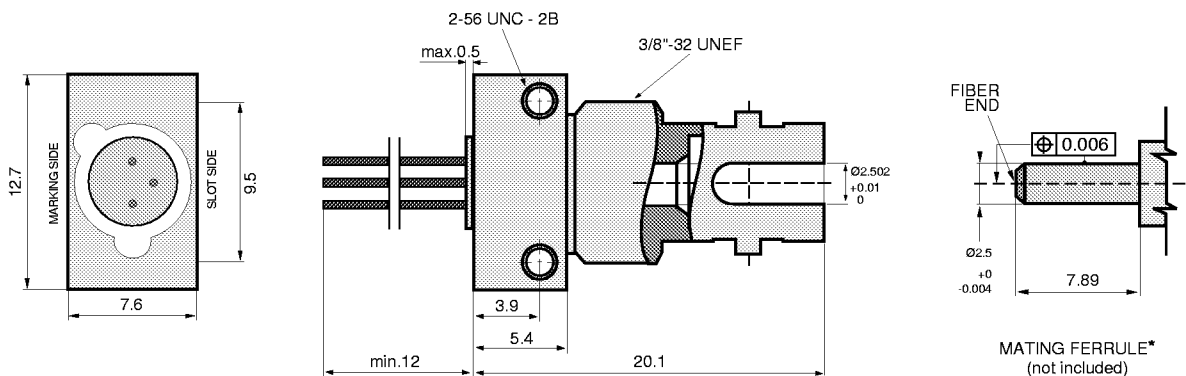
PARAMETER	SYMBOL	LIMIT
Operating & Storage Temperature ST-2A (Note 1)	$T_{stg}, T_{op}$	-40 to +85°C

Note 1: Temperature range can be extended to -55° to +125°C on request.

### Thermal Characteristics

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNT.
Thermal Resistance - Infinite Heat Sink (Note 2)	$R_{thcc}$			40	°C/W
Thermal Resistance - No Heat Sink (Note 2)	$R_{thca}$			200	°C/W
Thermal Resistance - On PC Board (Note 2)	$R_{thca}$		80		°C/W

Note 2: Add  $R_{thjc}$  for emitter or detector to estimate the total thermal resistance.



All Dimensions in mm

\*The fiber-coupled power/responsivity is guaranteed to meet the LED/PIN data sheet - provided a ferrule meeting this specification is used.

### Mechanical Outline of Diode in ST-2A Housing

(ST is a registered trademark of AT&T)

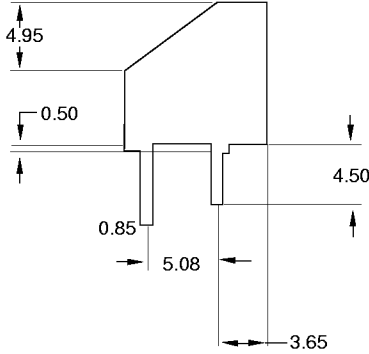
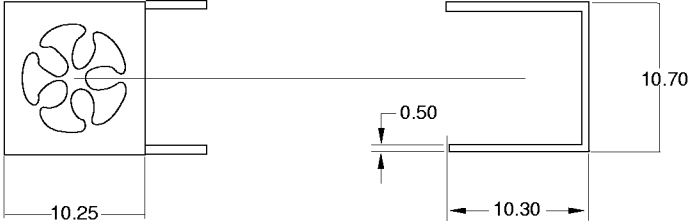
103326 1994-09-20



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Tel (44) 1291 436180 Fax (44) 1291 436771

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Asia: Tel (65) 293 5312 Fax (65) 293 8527

# Clip for Pigtail-3A



# Clip for SC-2A

