

STANDARD DRAWING

BI-100

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DATA SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

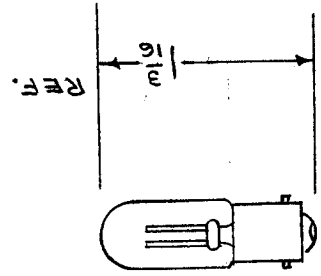
MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

TMC NO.	GE. NO.	VOLTS	WATTS	BULB
BI-100-51	NE-51	105-125	1/25	T-3/4
BI-100-51H	NE-51H	105-125	1/7	T-3/4

RTP-2

USED ON

MODEL	PROJECT NO.	ASSY. N.
IMI		



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Property of:
THE TECHNICAL MATERIEL CORPORATION
 MAMARONECK, NEW YORK

ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTSMAN	CHECKER	ENG. APP.
E	Z	ON BI-100-51H, VOLTS WAS 110-125; WATTS WAS 1/25	1-8-63	7965	[Signature]	[Signature]	[Signature]
D	1	ADDED TMC # BI-100-51H 125V. WAS ADDED	10/10/68	4	[Signature]	[Signature]	[Signature]
C	2	NE-51 WAS 51	24.	3	[Signature]	[Signature]	[Signature]
B	3	BI-100-44 WAS DELETED	8/11/54	2	[Signature]	[Signature]	[Signature]
A	4	GE NO. WAS 1" 44	9/8/51	1	[Signature]	[Signature]	[Signature]

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
			THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
			NEON LAMP, MINIATURE	
			BAYONET BASE	
			COND. G-B-5A G.T.O	
			DRAWN	
			ELEC. DES. APP.	
			CHECKED	
			FINAL APPROV.	
			BI-100	

TOLERANCES

DEC. DIM. ±
 FRAC. DIM. ±
 ANGULAR DIM. ±

DRILL, PUNCH, COMMERCIAL ST CK
 SIZES AND MANUFACTURERS
 TOLERANCES ARE NOT INCLUDED.

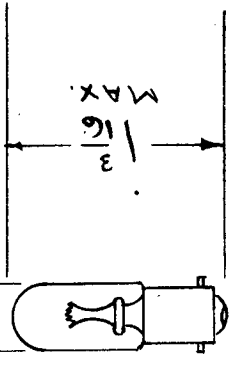
STANDARD DRAWING

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TMC NO.	GE. NO.	VOLTS	AMP	BULB
BI-101-44	44	6-8	0.25	T-3/4
BI-101-47	47	6-8	0.15	T-3/4
BI-101-44(AF)	44(AF)	6-8	0.25	T-3/4
BI-101-1829	1829	28	0.07	T-3/4
BI-101-1820	1820	28	0.10	T-3/4
BI-101-1819	1819	28	0.04	T-3/4
BI-101-49	49	2.0	0.6	T-3/4

→ .430 DIA. MAX.



NOTE: AF FOLLOWING P/N DESIGNATES FROSTED GLASS.

ISSUE ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS CHECKING/ENG. APP.
G 1	NOTE ADDED	10/26/49	12598	JSE
F 2	ADDED BI-101-1819	2/4/50	10790A-M	JTC
F 3	ADDED BI-101-49	11/27/49	7724	JSE
F 4	BI-101-1820 ADDED	4/20/50	12	JSE
F 5	BI-101-44(AF) ADDED	11/28/49	1	JSE
F 6	REDRAWN - NO CHANGE	5/8/51	12598	JSE

TOLERANCES

DEC. DIM. ±
FRAC. DIM. ±
ANGULAR DIM. ±

DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.

MODEL _____ PROJECT NO. _____ ASSY. NO. _____

USED ON

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
#	#	THE TECHNICAL MATERIEL CORP. MANARONECK. NEW YORK	
#	#	LAMP, INCANDESCENT	
MATERIAL	WEIGHT PER PC	MIN. BAYONET BASE	
STOCK SIZE		C.D.D. G.B. 54	
TYPE & TEMPER		G.T.O	
HEAT TREAT. SING.		DRAWN	
FINISH & SPEC. NO.		CHECKED	
		ELEC. DES. APP.	
		MECH.	
		FINAL APPROVAL	
		BI-101	

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

STANDARD DRAWING

USED ON

DATE

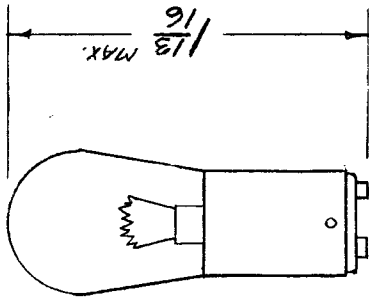
ASSY. NO.

PROJECT NO.

MODEL

REQ. PER UNIT

BI-102



TMC PART NO.	MFRS. NO. (SEE NOTE 1)	VOLTS	WATTS	BULB
BI-102-1	656/DC-105-115	105-115	6	SG
BI-102-2	656/DC-115-125	115-125	6	SG
BI-102-3	356/5DC	120	3	SG

NOTES:
MFRS NO'S. FOR BI-102-1, 2, 3, ARE SPECIAL UNLISTED CATALOG NO'S. AND ARE NOT STANDARD ITEMS.

ISSUE ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.
J	1 3/16 DIM WAS 1 3/4	5-3-63	89A0			
H	2 CHART CLARIFIED NOTE ADDED	7-18-63	8274			
G	1 0NB1-102-3 GE. NO WAS 356	4-16-61	4577			
F	2 356 ADDED	1/31/57	6			
E	1 NOTE REMOVED	8/6/56	5			
D	1 BI-102-3 COMM. REF Deleted	10/16/55	4			
C	2 NOTE ADDED REDRAWN	2-9-57	3			

SCALE	TOLERANCES
DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.	
DBC. DIM. ±	
FRAC. DIM. ±	
ANGULAR DIM. ±	

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
		INCANDESCENT LAMP	
		DOUBLE CONTACT BAYONET BASE	
		RB. 2-9-57	W02
		DRAWN	
		ELEC. DES. APP.	
		MECH. DES. APP.	
		CHECKED	
		FINAL APPROVAL	
		BI-102	J

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

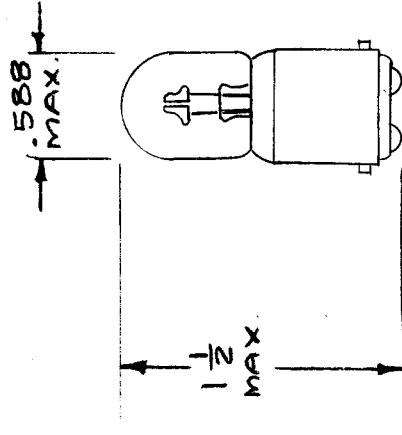
MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

TMC NO.	NE	VOLT	W.	BULB
BI-103-1	16	110	1/25	T-4 1/2
BI-103-2	48	110	1/4	T-4 1/2

BI-103

USED ON

MODEL	PROJECT NO.	ASSY. NO.	DATE
SFO-2			2-12-53



REF: GENERAL ELECTRIC

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		NEON LAMP - DOUBLE	
		CANDALABRA BAYONET BASE	
		DRAWN 2-12-53	ELEC. DES. APP. <i>[Signature]</i>
		CHECKED 2-12-53	MECH. DES. APP. <i>[Signature]</i>
		FINAL APPROVAL	
		BI-103	A

ISSUE ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.
A 1	BI-103-2 Added (for SPT-10000)	1/8/59	-	16	Hyde	<i>[Signature]</i>

SCALE _____

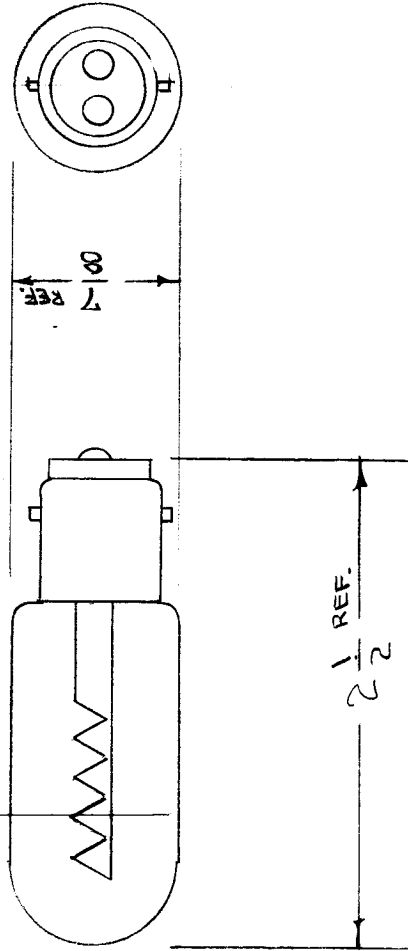
TOLERANCES

DEC. DIM. ±
FRAC. DIM. ±
ANGULAR DIM. ±

DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.

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SPECIFICATIONS

WATTS: 15
 BULB: T7
 BASE: DOUBLE CONTACT BAYONET
 VOLTAGE: 115-125
 CURRENT: 0.139 AMP.
 GLASS: CLEAR
 CLASS & FILAMENT: B, C7A
 LAMP-LIFE: 600 HRS.
 APPROX. LAMP LUMENS: 115

REF: S401-40 P/N 15T7DC

BI 104 A

USED ON
 MODEL PROJECT NO. ASSY. NO. DATE

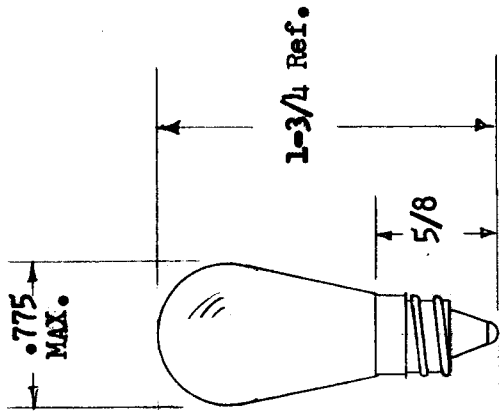
REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
#		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
STOCK SIZE		LAMP, INCANDESCENT	
MATERIAL		DOUBLE CONTACT BAYONET	
WEIGHT PER PC.		C.D.D. 3-8-54	
TYPE & TEMPER		DRAWN	ELEC. DES. APP. MECH. DES. APP.
HEAT TREAT. SPEC.		CHECKED	FINAL APPROVAL
FINISH & SPEC. NO.			BI 104 A

ISSUE ITEM	CHG. DATE	CHG. FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.
A	2/24/66	15769 HLA	9/25	9/25			

TOLERANCES		SCALE
DEC. DIM. ±	FRAC. DIM. ±	ANGULAR DIM. ±
DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.		

REQ. PER. UNIT	USED ON	BI-105	C
MODEL	ASSY. NO.	4 20 59	
	DATE		

TMC PART NO.	MFG. NO.	VOLTAGE	WATTS	BULB TYPE
BI-105-1	10S6/10	250 V	10	S6
BI-105-2	6S6	48-50 V	6	S6



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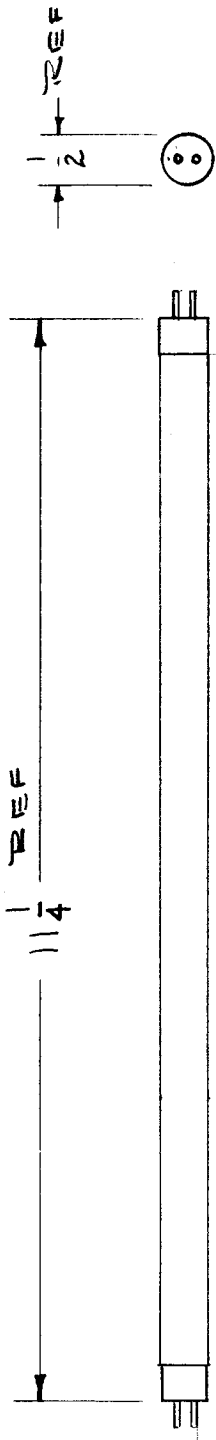
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 THE TECHNICAL MATERIEL CORPORATION
 MAMARONECK, NEW YORK

STANDARD DRAWING

REQ. ITEM	3,8,68	18801	HE.	W. E. F. M.	REVISIONS	PART NO.	DESCRIPTION	SYMBOL
B	VOLTAGE - 250V WAS 230V	102664	BB	J. E.			THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
A	BI-105-2 ADDED	4/26/61	DM	J. P. S. M.			LAMP, INCANDESCENT, SCREW BASE	
ISSUE ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	MATERIAL	
TOLERANCES		SCALE: S401-40, S401-267, S401-329		TYPE & TEMPER		HEAT TREAT. SPEC.		
DEC. DIM. ±		MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION.		FINISH & SPEC. NO.				
FRAC. DIM. ±		REMOVE ALL BURRS AND SHARP EDGES		DRAWN		CHECKED		
ANGULAR DIM. ±				T. P. L. L. O.		H. D. O.		
				ELEC. DES. APP. MECH. DES. APP.				
				FINAL APP. VAL				
				BI-105				C

REQ. PART UNIT	MODEL	USED ON	
		ASPT. NO.	DATE
2	GPT-10K	AX-17B	4-17-59
1	GPT-10K	AX-107	4-17-59
2	GPT-40K	AM-109	4-4-60
2	GPT-40K	AT-101	4-4-60

BI-107



ELECTRICAL SPECIFICATION:

8 Watts
Standard, Cool, White

Reference: Starter - TMC # PO-170
Ballast - TMC # PO-169
Socket - TMC # TS-141

NOTE: DIM. FOR REF ONLY

REF ~ GENERAL ELECTRIC # F8T-5CW

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		LAMP, FLUORESCENT	
		10R110 4-17-59	
		DRAWN	
		CHECKED	
		TYPE & TEMPER	
		HEAT TREAT. SPEC	
		FINISH & SPEC. NO.	
		ELEC. DES. APP	
		MECH. DES. APP	
		FINAL APPROVAL	BI-107

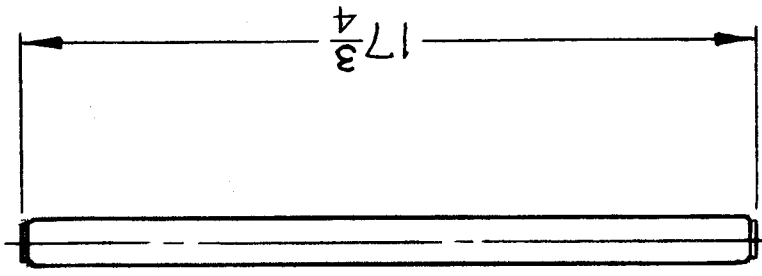
BI-108 A

USED ON
ASSY. NO.
DATE
12-10-59

REQ. PER UNIT
1

MODEL
CON

SPECIFICATIONS ~
30 WATTS
115 / 125 VOLTS AC
GLASS ~ INSIDE FROSTED



FOR USE w/TMC PT. NO'S TS-145 & HB-114

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		LAMP, INCANDESCENT (LUMILINE)	
		J.C. Biele	
		DRAWN	
		CHECKED	
			FINAL APPROVAL
			BI-108 A
			ELEC. DES. APP. MECH. DES. APP.

ISSUE ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.
A 1	CLERICAL CHANGE	11.17.64			JCS	

SCALE: 5401-83 (L30/IF)

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

TOLERANCES

DEC. DIM. ±
FRAC. DIM. ±
ANGULAR DIM. ±

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TMC PART NO. "A"
 BI 109-1 1.125
 BI 109-2 1.080

USED ON
 MODEL HFS-1
 ASSY. NO.

DATE
 8-15-62

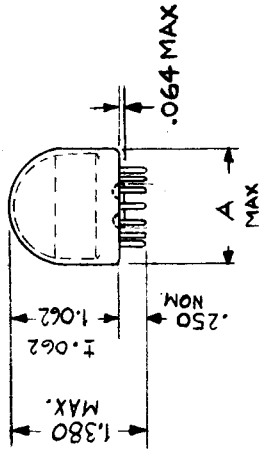
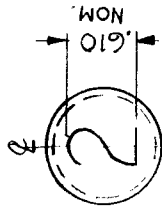
BI 109

B

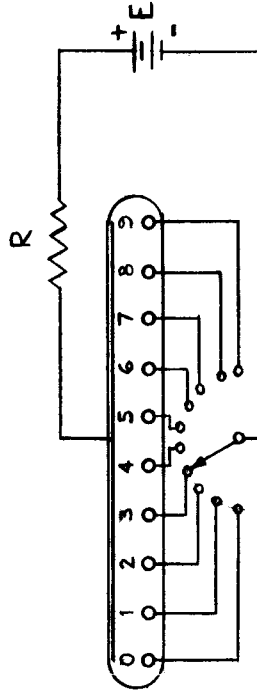
NOTE: DO NOT USE PINS
 1 & 8



BOTTOM VIEW
 DETAIL "A" ENVELOPE CONNECTION



NOTES~
 1~ THE TUBE SOCKET IS ORIENTED WITH RESPECT TO THE VIEWING POSITION SO THAT PINS 1 & 8 ARE VERTICAL WITH PIN 8 ON TOP. THIS ORIENTS THE NUMERALS IN THE CORRECT VERTICAL POSITION. THEY ARE VIEWED THROUGH THE TOP OF THE TUBE.



TYPICAL CIRCUIT
STANDARD DRAWING

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES.
 TOLERANCES ON
 FRAC. ± 1/64 DEC. ± .05 ANGLES ± 1/2°

SCALE: DO NOT SCALE
 MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION.
 REMOVE ALL BURRS AND SHARP EDGES

REQ. PER UNIT
 MODEL HFS-1
 ASSY. NO.
 STOCK SIZE
 MATERIAL
 TYPE & TEMPER
 HEATTREAT. SPEC.
 FINISH & SPEC. NO.

MECHANICAL SPECIFICATIONS~
 SEATED HEIGHT ~ 1.125 MAX.
 ENVELOPE CONNECTIONS ~ SEE DETAIL "A".
 MATING SOCKET ~ TMC # TS157
 TEMP. ~ -65°C THROUGH + 70°C.
 MOUNTING POSITION ~ SEE NOTE 1
 CATHODE(S) ~ GLOW DISCHARGE.

ELECTRICAL SPECIFICATIONS~
 1~ ELECTRICAL RATINGS:
 IONIZATION VOLTAGE ~ 170 VDC MAX.
 CATHODE CURRENT ~ PEAK 3.5 MA MAX.
 AVERAGE 2.0-3.0 MA

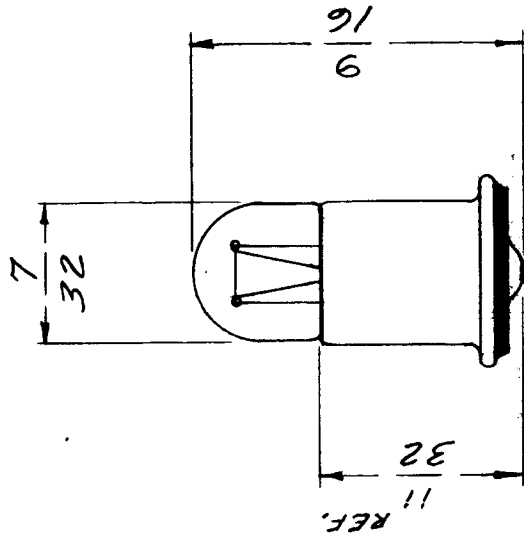
2~ TEST CONDITIONS (SEE TYP. CIRCUIT).
 ANODE SUPPLY VOLTAGE ~ 170 VDC
 ANODE SERIES RESISTOR ~ 10 K OHMS.
 CATHODE CURRENT ~ 1.5 mA MIN.
 ~ 3.0 mA MAX.
 RECOMMENDED OPERATING CONDITIONS
 (SEE TYP. CIRCUIT).

E R
 170 10-15K
 250V 39-47K
 300V 68-75K

J. STRUMMER DESCRIPTION SYMBOL
 THE TECHNICAL MATERIEL CORP.
 MAMARONECK, NEW YORK
 INDICATOR, DIGITAL DISPLAY

MAF J De
 DRAWN CHECKED
 JMA JMA
 ELEC. DES. APP. MECH. DES. APP.
 BI 109 B
 FINAL APPROVAL

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USED ON

DATE
10-24-61

BI-110 B

TMC PART NO.	MFR NO.	VOLTS AC/DC	AMPS	LIFE HOURS	MIL EQUIV. NO.
BI 110-1	*331	1.3	.06	500	
BI 110-2	*338	2.7	.06	500	
BI 110-3	328	6.0	.20	500	M525237
BI 110-4	345	6.0	.04	1000	
BI 110-5	*344	10.0	.015	INDEFINITE	
BI 110-6	330	14.0	.08	750	
BI 110-7	327	28.0	.04	1000	M525237
BI 110-8	349	6.3	.20	3000	
BI 110-9	387	28.0	.04	25,000	
BI 110-10	382	14.0	.08	50,000	

* RECOMMENDED FOR USE WITH TRANSPARENT LENSES ONLY

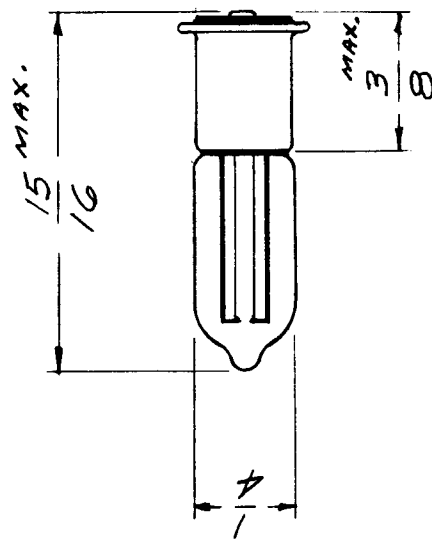
STANDARD DRAWING

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
B	BI 110-10 ADDED	LAMP, INCANDESCENT, SINGLE	
A	BI 110-9 ADDED	CONTACT, MINIATURE T-134	
SYM	DESCRIPTION	MATERIAL	
		W.S. 10-24-61	JFM
		DRAWN	FINAL APPROVAL
		CHECKED	BI-110 B
		TYPE & TEMPER	MECH. DES. APP.
		HEAT TREAT. SPEC.	
		FINISH & SPEC. NO.	

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES ON
FRAC. ± 1/64 DEC. ± .005 ANGLES ± 1/2°

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TMC PART NO.	MFR. NO.	CIRCUIT VOLT (AS OF DC)	NOM. CURRENT MA	NOM. WATTS	LIFE (HRS)	LAMP SIZE	USED ON	
							MODEL	DATE
BI-1111-1	NE-2D	110-125	0.6	1/15	25,000	T-2	Stand.	10/25/61
BI-1111-2	NE-2J	110-125	1.7	1/15	25,000	T-2		



DIM. FOR REF ONLY

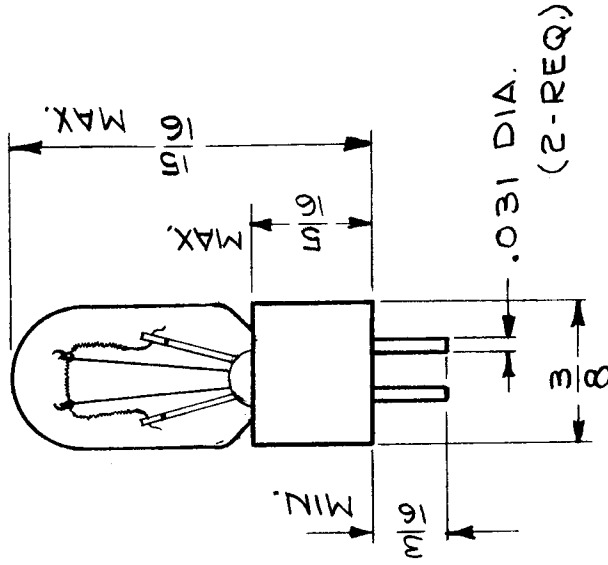
STANDARD DRAWING

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		LAMP, GLOW (NEON)	
		MIDGET FLANGE BASE	
		W.S. R. JZED	
		10-25-61	
		DRAWN	
		CHECKED	
		FINAL APPROVAL	
		BI-1111	
		ELEC. DES. APP. MECH. DES. APP.	
		FINISH & SPEC. NO.	
		HEAT TREAT. SPEC.	
		MATERIAL	
		STOCK SIZE	
		TYPE & TEMPER	
		SCALE: 5-401-40	
		DATE	
		CH. NO.	
		DRAFTS	
		CHECKER	
		ENG. APP.	
		UNLESS OTHERWISE SPECIFIED:	
		DIMENSIONS ARE IN INCHES	
		TOLERANCES ON	
		FRAC. ± 1/64 DEC. ± .005 ANGLES ± 1/2°	

REQ. PER UNIT 4	USED ON	
	MODEL TTRT-1,2,3A	DATE 1-31-64
BI-113		SYMBOL Ø

~SPECIFICATIONS~

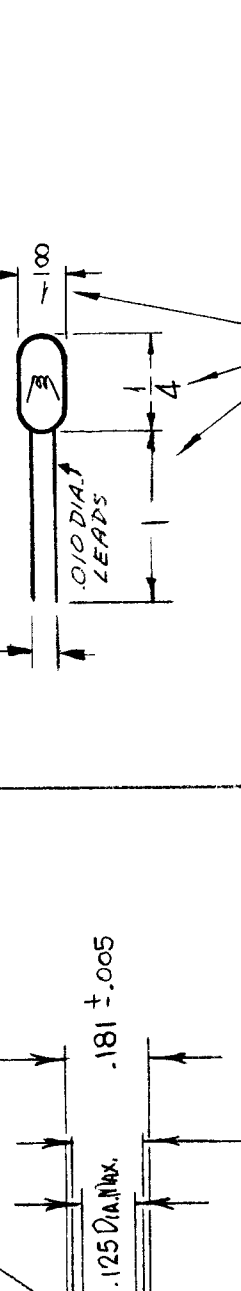
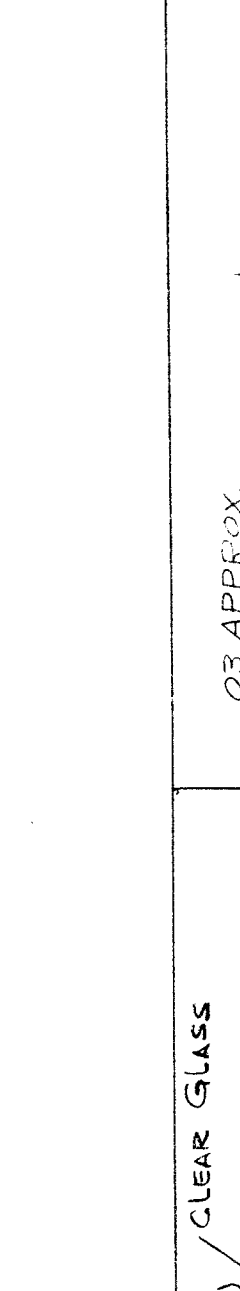
BULB ~ T 3/4
 BASE ~ SPECIAL, EPOXY WITH PINS.
 VOLTAGE ~ 28 VOLTS. (AC. OR DC)
 CURRENT ~ .17 AMPS
 LIFE ~ 500 HOURS



ORIGINAL RELEASE FOR PRODUCTION
 DATE 6/22/64
 CH. NO. Ø
 DRAFTS CHECKER A.M.
 SCALE 2:1
 CODE C
 5401-267 (CM7313)

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		PALMER	
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		LAMP, INCANDESCENT	
		MINIATURE	
		<i>J. A. W. 1/24 RA</i>	
		DRAWN	CHECKED
		W.A. PALMER	FINAL APPROVAL
		ELEC. DES. APP.	MECH. DES. APP.
		BI-113	Ø

TMC P/N	MFG P/N	VOLTS	AMPS	CANDLE-POWER	LIFE	BULB SIZE	DETAIL	MFR	REQ. PER UNIT	MODEL ASSY. NO.	USED ON
BI114-1	880	5-6	.065	.050 ±	10,000	T1	A	A	12	ARCA-1	BI114
BI114-2	683 MSR4367	5-6	.063	.053	60,000	T1	A	B			DATE 11-3-64
BI114-3	20	12	.060	.15	16,000	T1	A	C			
BI114-4	71	12	.060	.13	16,000	T1	B	C			



INSULATING BRASS BASE BUSHING (NICKEL PLATED)
 CLEAR GLASS
 CENTER CONTACT
 .125 DIA. MAX.
 .181 ±.005
 .104 ±.003
 .040 ±.010
 .020 ±.005
 .015 ±.002
 .187 ±.031
 L.C.L.
 ". TIPLESS" CONSTRUCTION (FOR UNDISTORTED END VIEWING)
 DETAIL "B"

MFR. REF. CODE
 A S401-82G
 B S401-60
 C S401-416

STANDARD DRAWING

SYM	DESCRIPTION	EATON	DESCRIPTION	SYMBOL
B	ADD. P/N "4", APP. DETAIL "B", APP. MFR REF. CODE			
A	BI114-3, 1 INCHES, UNPRODUCED			
X	EXP. RELEASE FOR PRODUCTION			

REQ. ITEM	PART NO.	EATON	DESCRIPTION	SYMBOL
			THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
			LAMP, INCANDESCENT	

DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.
11-3-64	15586	X	SRG	

SCALE	2:1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES	

DESCRIPTORS	PER. DES. APP.	MATERIAL	MATERIAL
.X ±.05	SRG @ 11-4-64		
.XX ±.01	FREE		
.XXX ±.005			

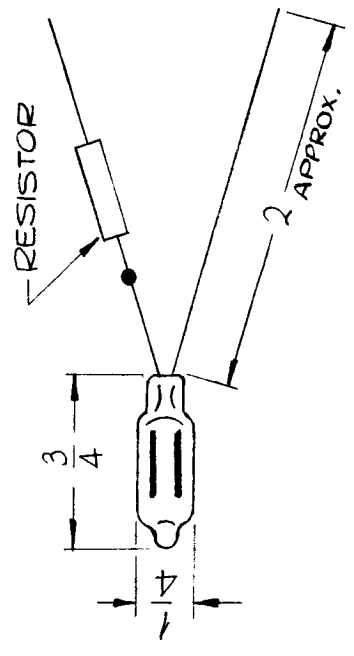
TYPE & TEMPER	HEAT TREAT. SPEC.	DRAWN	CHECKED	FINAL APPROVAL
FINISH & SPEC. NO.		SRG	FREE	BI114

CODE	SEE MFR. REF. CODE
C	

REQ. PER UNIT	MODEL	ASSY. NO.	DATE
	RTIU-1		10-20-64

USED ON
BI115

TMC P/N	LAMP TYPE	LAMP CHARACTERISTICS				EXTERNAL RESISTOR	ASSY OPER. VOLT
		VOLT	POWER	MA CURRENT	AVERAGE LIFE (HRS)		
BI115-1	NE2V	65AC 90DC	1/15	0.6	25000	68K 1/4W.	180



REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		LAMP, NEON (W/RESISTOR)	
		SRG @ 10-27-64	
		DRAWN	CHECKED
		10/27/64	FINAL APPROVAL
		ELEC. DES. APP.	MECH. DES. APP.
		FINISH & SPEC. NO.	BI115

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SCALE	
SIZE	A
CODE IDENT. NO.	82679
DWG. NO.	BI 120
ISSUE	A

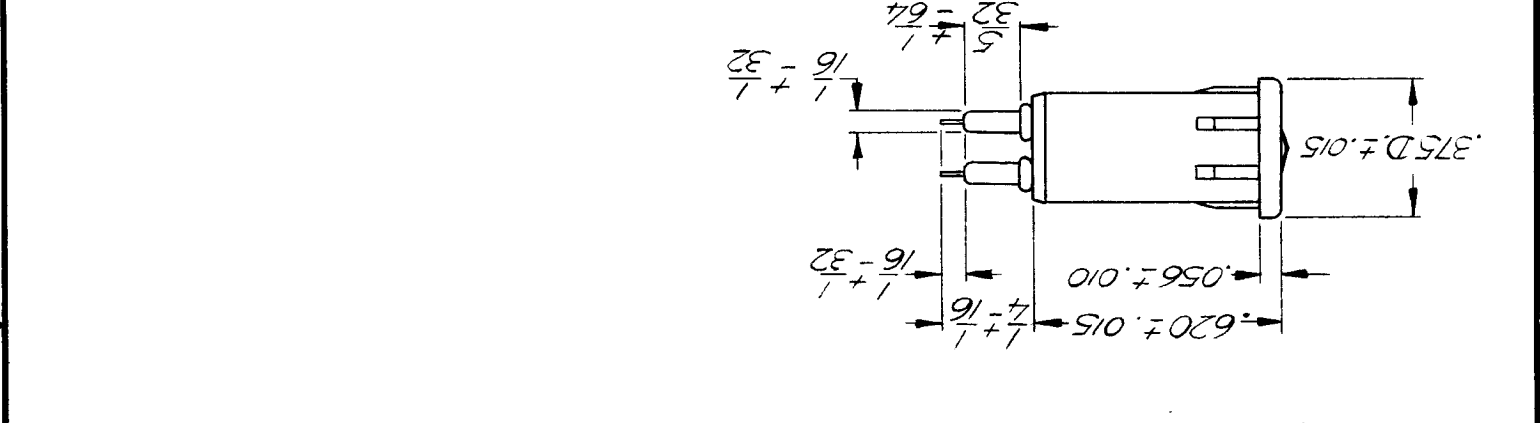
DATE	4/1/69	DRAWN	<i>[Signature]</i>
DATE	4-1-69	CHECKED	<i>[Signature]</i>
DATE	4/2/69	ELECT. DES.	<i>[Signature]</i>
DATE		MECH. DES.	
DATE		FINAL APPROVAL	<i>[Signature]</i>

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES	
DECIMALS	X ± .05
FRACTIONS	1/64
TOLS.	.XX ± .01
ANGLES	00 .30'

THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK

LIST OF MATERIAL

REQ'D ITEM	PART NUMBER	DESCRIPTION	SYM.
------------	-------------	-------------	------



01 CLEAR	04 AMBER
02 RED	05 BLUE
03 GREEN	06 OPAL

TMC P/N	MFR P/N	HOUSING	OPERATING VOLTAGE	LENS COLOR
BI 120-1	147-2203-100	BLACK	4- 6VOLTS	SEE
-2	147-2203-300	BLACK	10-14VOLTS	COLOR
-3	147-2203-400	BLACK	22-28VOLTS	TABLE

APPLICATION		REVISIONS							
QTY	MODEL USED ON	ASS'Y NO.	LTR	DESCRIPTION	DATE	E.M.N.NO	DRAFT	CHKD	APPD
	MTR () 150		X	EXP. RELEASE	4/1/69	X	KH	RG	ES
			Ø	ORIG. RELEASE FOR PROD.	4/2/69				
			A	ADD MFRS REF CODE	8-11-69	CC	GE		

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SCALE	A	CODE IDENT. NO.	82679	DWG. NO.	BI 131	ISSUE	OF
SHEET							

DATE	1-3-77	DRAWN	G.D.L.
DATE		CHECKED	
DATE		ELECT. DES.	
DATE		MECH. DES.	
DATE		FINAL APPROVAL	<i>[Signature]</i>

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES.
 DECIMALS: X ± .05, XX ± .01, XXX ± .005
 TOLS: 1/64, ANGLES: 0° 30'

LIST OF MATERIAL

SYM.	REV. ITEM	PART NUMBER

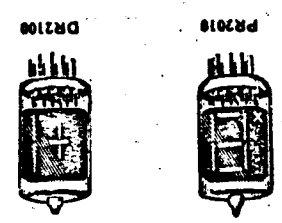
RCA NUMITRON
 DIGITAL DISPLAY DEVICES—SEGMENTED INCANDESCENT TYPES

- High Brightness—Fully Adjustable
- Low Voltage Operation
- High Contrast Segmented Digits
- Wide Viewing Angle
- High Reliability rugged Build
- Wide Spectrum

Type	Digital Display
DR2000 DR2100	0.9
DR2010 DR2110	0.9
DR2030 DR2130	+ and 1
DR2030 DR2130	+ and 1

RCA Numitron types DR200 series and DR2100 series are digital display devices which provide a sharp, high-brightness incandescent-type display. These devices are compatible with IC decoder/drivers and may be operated in either a direct or multiplex mode.

Partial listing. See RCA Tube Directory for full Catalog Tube Listing.



RCA Numitron

MS P/N (5 per)
 DR2100
 DR2110 (1 per) WITH DECIMAL

BI 131-1
 BI 131-2

QTY	MODEL USED ON	ASSY NO.	LTR	DESCRIPTION	DATE	E.M.N. NO.	DRAFT	CHKD	APPD
	GPR-110			ORIGINAL RELEASE FOR PRODUCTION	10-3-77				

STANDARD DRAWING

BI10001 A

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

USED ON

DATE

ABS'Y. NO.

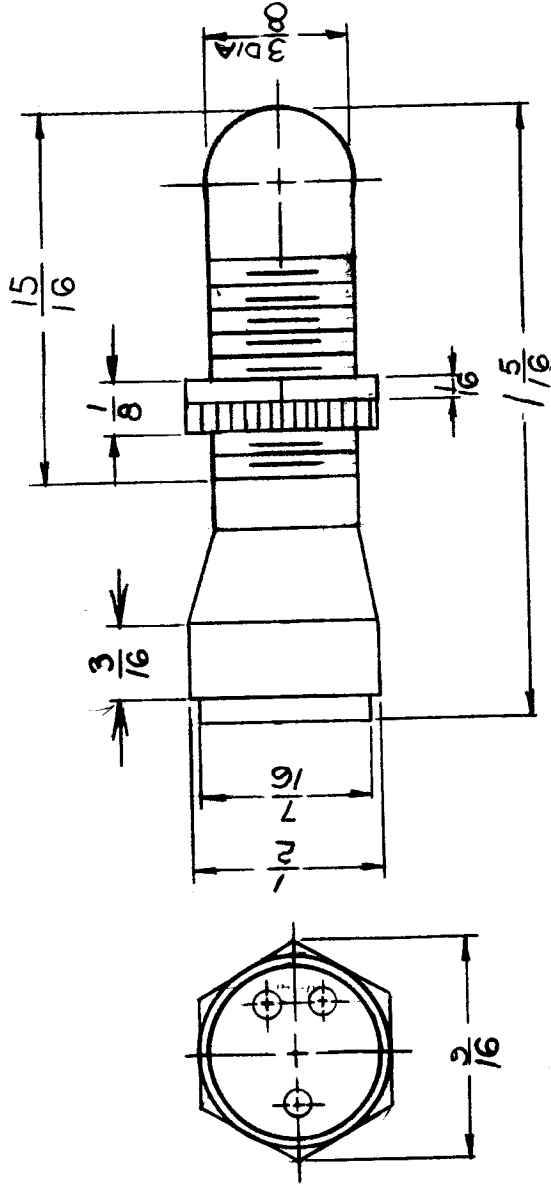
PROJECT NO.

MODEL

JUNE 15 1959

A10222

SCU-2



REF: DRAKE MFG. CO. TYPE NO. R115
TAPER LITE.

NOTE: INCORPORATES NON-REPLACEABLE NEON GLOW LAMP.

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		TMC (Canada) LIMITED OTTAWA	
		LIGHT, INDICATOR	
		NEON (DISPOSABLE) 125V	
		JPC	
		DRAWN	ELEC. DES. APP. <i>[Signature]</i> H. DES. APP.
			FINAL APPROVAL
		CHECKED	
		FINISH & SPEC. NO.	BI10001 A

A 1 NOTE ADDED JAN.
A 2 TITLE CHANGED 20/60

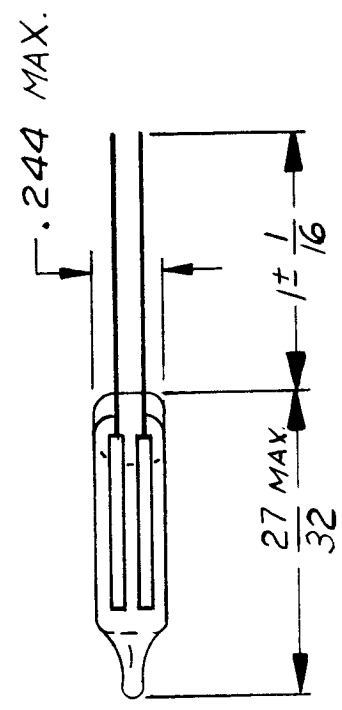
ISSUE ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS CHECKER	ENG. APP.
				JPC	<i>[Signature]</i>

SCALE 2:1

TOLERANCES
DRILL, PUNCH, COMMERCIAL STOCK
SIZES AND MANUFACTURERS
TOLERANCES ARE NOT INCLUDED.

BI 10005

ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.	REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
Ø		REL TO PROD	DEC 10/68		AP							



ELECTRICAL :-

BREAKDOWN VOLTAGE VDC - 70 MAX.
 MAINTENANCE VOLTAGE VDC - 58 MAX.
 DESIGN CURRENT (AVG.) Ma - 0.3
 EXTINGUISHING VOLTAGE VDC - 47
 AVERAGE LIFE HOURS - 7,500

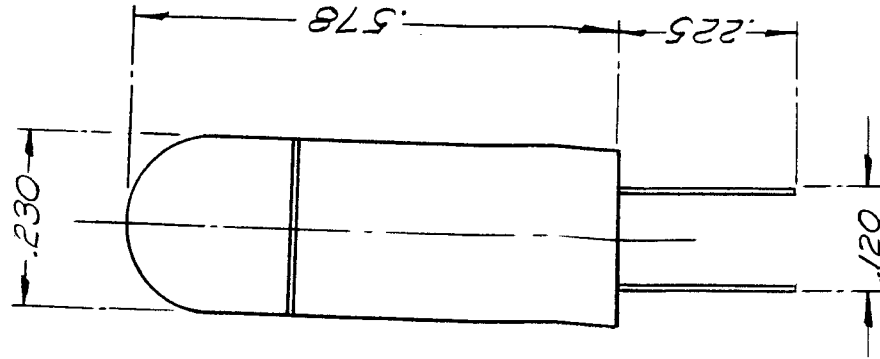
NOTES :-

- 1) END OF LIFE IS A 6V INCREASE IN MAX. BREAKDOWN OR MAINTAINING VOLTAGE
 - 2) DARK EFFECT REDUCED
 - 3) PRE - AGED
 - 4) ANODE IDENTIFIED BY GREEN DOT.
 - 5) 1" AND 2" LEAD WIRE LENGTH'S STANDARD.
- MANUFACTURER NO. S10045-71
 MANUFACTURER'S PART NO. A 079

STANDARD DRAWING

<p>TMC (Canada) LIMITED OTTAWA ONTARIO</p>		<p>LAMP GLOW</p>	
STOCK SIZE		MATERIAL	WEIGHT PER FC.
<p>IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.</p>		<p>IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.</p>	
<p>MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES</p>		<p>SCALE</p>	
<p>DEC. DIM. ± .X = .05 FRAC. DIM. ± 1/64 .XX = .01 ANGULAR DIM. ± 0'30' .XXX = .008</p>		<p>DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.</p>	
<p>ALL OTHERS</p>		<p>FINISH & SPEC. NO.</p>	
<p>AP</p>		<p>BI 10005 Ø</p>	
<p>DRAWN</p>		<p>MECH. DES. APP.</p>	
<p>CHECKED</p>		<p>FINAL APPROVAL</p>	

ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
Φ		PROD. RELEASE	9 MAR 73		C.C.							



MANUFACTURER'S NO. : T-13/4, # 2308
 DESIGN VOLTS : 10.0
 AMPERES : .014
 APPROXIMATE LIFE : 5,000 + (HOURS)
 FILAMENT TYPE : C-2F

NOTE: IF NOT AVAILABLE, SUBSTITUTE TYPE #1869 WITH WIRE LEADS.

MANUFACTURER: HUDSON LAMP CO.

RC SR-1R	141/792	PROJECT NO.	A108-5	ASS'Y. NO.	9 MAR 73	DATE
USED ON						
MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION REMOVE ALL BURRS AND SHARP EDGES			IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.			
TOLERANCES			SCALE 4:1			
ALL	DEC. DIM. ±	.X = .05	DIMENSIONS IN INCHES UNLESS OTHERWISE SPECIFIED			
OTHERS	FRAC. DIM. ± 1/64	.XX = .01	DRILL: PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.			
	ANGULAR DIM. ± 0' 30'	.XXX = .005				
TMC (Canada) LIMITED OTTAWA			LAMP, SUB-MINIATURE			
DRAWN			ELEC. DES. APP.		MECH. DES. APP.	
C. CHARLES					FINAL APPROVAL	
					BT 10008 Φ	