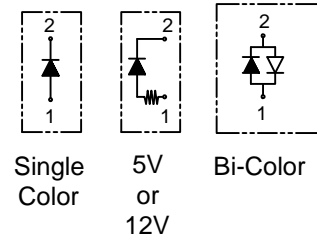
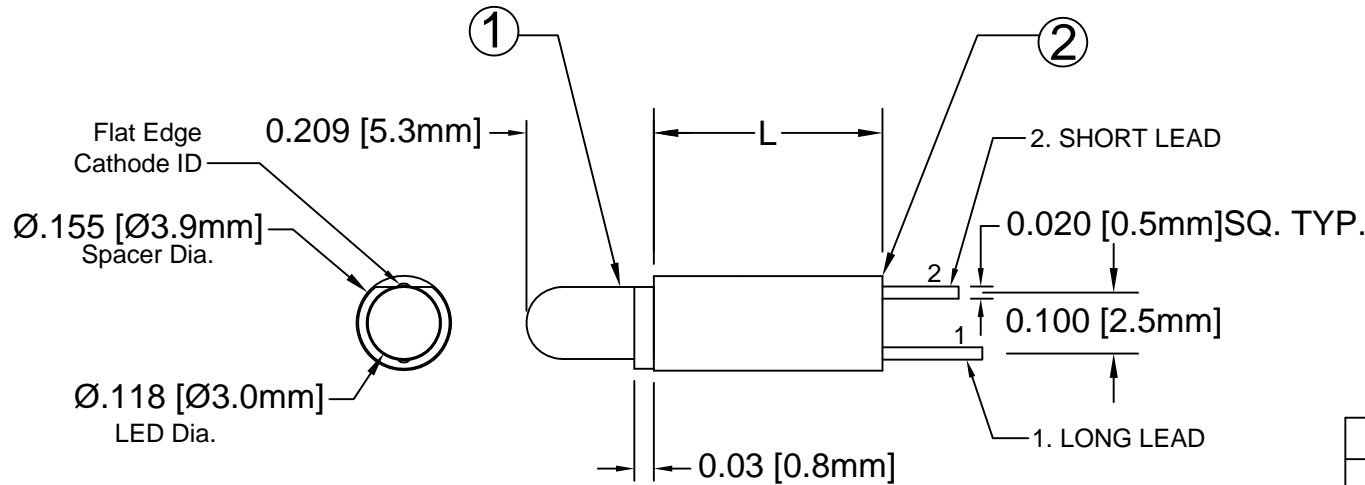
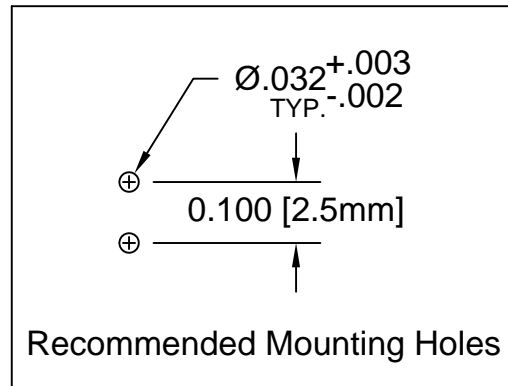


ITEM	Q'TY	PART NUMBER	PART DESCRIPTION
1	1	3XX-F	T-1 (3mm) Flanged LED, See Pages 2 to 4
2	1	ELM 5-XXX	Extruded, Self-Retaining Narrow LED Spacer

REV.	DESCRIPTION	DATE	APPROVED
K	Added Bi-Color LED Polarity Diagram	03/29/10	T. Y.
L	Added Tape & Reel Options	06/07/11	T. Y.
M	Tape & Reel Design Update	11/21/11	T. Y.
N	LED Offering List Update	07/27/12	T. Y.
P	Corrected LED Typo	08/09/13	T. Y.
R	Corrected P/N Typo in BOM	09/19/13	T. Y.
T	Updated LED Optical Characteristics	09/12/15	J. C.


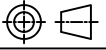


BI-COLOR POLARITY		
LED P/N	(1) Cathode	(2) Cathode
3BC-F	Green	Red
3BC-Y/G-F	Green	Yellow
3BC-R/Y-F	Yellow	Red
3BC-A/G-F	Green	Amber





## ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

REVERSE VOLTAGE	_____	5V
REVERSE CURRENT	_____	100uA
OPERATING TEMPERATURE RANGE	_____	-25° C - 85° C
STORAGE TEMPERATURE	_____	-30° C - 100° C
LEAD SOLDERING TEMPERATURE(1/16" FROM BODY)	_____	260° C FOR 5 SECONDS

STANDARD TOLERANCE (UNLESS OTHERWISE SPECIFIED)		 4 THOMAS, IRVINE, CA. 92618 TEL: (949) 951-8808 FAX: (949) 951-3974	
DECIMALS	ANGULAR		
.X ± .1	X° ± 1°	 <b>TITLE:</b> EXTRUDED VERTICAL T-1 (3mm) LED STANDARD PROFILE SPACER ASSY	
.XX ± .02			
.XXX ± .010			
DESIGNED: <b>Minh Doan</b>	DATE: <b>07/27/12</b>	<b>PART NO:</b> ELM5XXX3XX	REVISION: T
CHECKED: <b>T. Yin</b>	DATE: <b>07/27/12</b>	<b>CAGE CODE :</b> 32559	<b>SHEET # 1 OF 5</b>
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REV.	DESCRIPTION	DATE	APPROVED
	SEE SHEET #1.		

LED Assy. No.	Chip			Lens Appearance	Electro-Optical Data @ 20mA				Viewing Angle 2θ ½ (Deg)	LED P/N	
	Material	Peak Wave Length	Emitted Color		If (mA)	Vf (V)		Iv (mcd)			
						MAX	TYP	MAX			TYP
ELM5XXX3BWC	GaN/SiC	430	BLUE	WATER CLEAR	25	4	4.5	15	20	3BWC-F	
ELM5XXX3BWD	GaN/SiC	430	BLUE	DIFFUSED	25	4	4.5	10	35	3BWD-F	
ELM5XXX3BWT	GaN/SiC	430	BLUE	TINTED	25	4	4.5	15	20	3BWT-F	
ELM5XXX3GC	GaP/GaP	568	GREEN	WATER CLEAR	30	2.1	2.8	40	20	3GC-F	
ELM5XXX3GD	GaP/GaP	568	GREEN	DIFFUSED	30	2.1	2.8	25	35	3GD-F	
ELM5XXX3GT	GaP/GaP	568	GREEN	TINTED	30	2.1	2.8	40	20	3GT-F	
ELM5XXX3PGC	GaP/GaP	555	PURE GREEN	WATER CLEAR	30	2.2	2.8	10	20	3PGC-F	
ELM5XXX3PGD	GaP/GaP	555	PURE GREEN	DIFFUSED	30	2.2	2.8	5	35	3PGD-F	
ELM5XXX3PGT	GaP/GaP	555	PURE GREEN	TINTED	30	2.2	2.8	10	20	3PGT-F	
ELM5XXX3YC	GaAsP/GaP	590	YELLOW	WATER CLEAR	30	2	2.8	40	20	3YC-F	
ELM5XXX3YD	GaAsP/GaP	590	YELLOW	DIFFUSED	30	2	2.8	20	35	3YD-F	
ELM5XXX3YT	GaAsP/GaP	590	YELLOW	TINTED	30	2	2.8	40	20	3YT-F	
ELM5XXX3AC	GaAsP/GaP	605	AMBER	WATER CLEAR	30	2	2.8	40	20	3AC-F	
ELM5XXX3AD	GaAsP/GaP	605	AMBER	DIFFUSED	30	2	2.8	25	35	3AD-F	
ELM5XXX3AT	GaAsP/GaP	605	AMBER	TINTED	30	2	2.8	40	20	3AT-F	
ELM5XXX3HC	GaAsP/GaP	625	HE RED	WATER CLEAR	30	2	2.8	50	20	3HC-F	
ELM5XXX3HD	GaAsP/GaP	625	HE RED	DIFFUSED	30	2	2.8	30	35	3HD-F	
ELM5XXX3HT	GaAsP/GaP	625	HE RED	TINTED	30	2	2.8	50	20	3HT-F	
ELM5XXX3RC	GaP/GaP	700	RED	WATER CLEAR	20	2.1	2.8	2.5	35	3RC-F	
ELM5XXX3RD	GaP/GaP	700	RED	DIFFUSED	20	2.1	2.8	2	20	3RD-F	
ELM5XXX3RT	GaP/GaP	700	RED	TINTED	20	2.1	2.8	2.5	20	3RT-F	
ELM5XXX3BC-A/G	GaAsP/GaP	605	AMBER	DIFFUSED	30	2.0	2.8	6	45	3BC-A/G-F	
	GaP/GaP	568	GREEN		30	2.1	2.8	6			
ELM5XXX3BC	GaAsP/GaP	625	RED	DIFFUSED	30	2.0	2.8	6	45	3BC-F	
	GaP/GaP	568	GREEN		30	2.1	2.8	6			
ELM5XXX3BC-R/Y	GaAsP/GaP	625	RED	DIFFUSED	30	2.0	2.8	6	45	3BC-R/Y-F	
	GaAsP/GaP	590	YELLOW		30	2.0	2.8	4			
ELM5XXX3BC-Y/G	GaAsP/GaP	590	YELLOW	DIFFUSED	30	2.0	2.8	4	45	3BC-Y/G-F	
	GaP/GaP	568	GREEN		30	2.1	2.8	6			

STANDARD TOLERANCE (UNLESS OTHERWISE SPECIFIED) ±10% ALL VALUES    ANGULAR X° ± 5°		 <b>BIVAR</b> <sup>®</sup> 4 THOMAS, IRVINE, CA. 92618 TEL: (949) 951-8808    FAX: (949) 951-3974	
			
DESIGNED: <b>Minh Doan</b>	DATE: <b>07/27/12</b>	<b>PART NO:</b> ELM5XXX3XX	REVISION: <b>T</b>
CHECKED: <b>T. Yin</b>	DATE: <b>07/27/12</b>	<b>CAGE CODE :</b> 32559	<b>SHEET # 2 OF 5</b>
CAD GENERATED DOCUMENT. DO NOT MEASURE DRAWING.			

REV.	DESCRIPTION	DATE	APPROVED
	SEE SHEET #1.		


LED Assy. No.	Chip			Lens Appearance	Electro-Optical Data @ 20mA				Viewing Angle 2 θ ½ (Deg)	LED P/N
	Material	Peak Wave Length	Emitted Color		If (mA)	Vf (V)		Iv (mcd)		
					MAX	TYP	MAX	TYP		
ELM5XXX3UBWC	GaN/SiC	470	BLUE	WATER CLEAR	30	4	4.5	400	30	3UBWC-0.6K-F
ELM5XXX3SGC	GaP/GaP	568	GREEN	WATER CLEAR	30	2.1	2.8	50	20	3SGC-F
ELM5XXX3SGD	GaP/GaP	568	GREEN	DIFFUSED	30	2.1	2.8	30	35	3SGD-F
ELM5XXX3SGT	GaP/GaP	568	GREEN	TINTED	30	2.1	2.8	50	20	3SGT-F
ELM5XXX3SYC	GaAsP/GaP	590	YELLOW	WATER CLEAR	30	2.0	2.8	50	20	3SYC-F
ELM5XXX3SYD	GaAsP/GaP	590	YELLOW	DIFFUSED	30	2.0	2.8	30	35	3SYD-F
ELM5XXX3SYT	GaAsP/GaP	590	YELLOW	TINTED	30	2.0	2.8	50	20	3SYT-F
ELM5XXX3SAC	AlGaInP	605	AMBER	WATER CLEAR	30	1.8	2.4	300	20	3SAC-F
ELM5XXX3SAD	AlGaInP	605	AMBER	DIFFUSED	30	1.8	2.4	100	35	3SAD-F
ELM5XXX3SAT	AlGaInP	605	AMBER	TINTED	30	1.8	2.4	300	20	3SAT-F
ELM5XXX3SRC	GaAlAs/GaAs	645	SUPER RED	WATER CLEAR	30	1.7	2.4	60	20	3SRC-F
ELM5XXX3SRD	GaAlAs/GaAs	645	SUPER RED	DIFFUSED	30	1.7	2.4	40	35	3SRD-F
ELM5XXX3SRT	GaAlAs/GaAs	645	SUPER RED	TINTED	30	1.7	2.4	60	20	3SRT-F
ELM5XXX3UGC	AlGaInP	570	GREEN	WATER CLEAR	30	2.1	2.4	200	20	3UGC-F
ELM5XXX3SUGC	AlGaInP	570	GREEN	WATER CLEAR	30	2.1	2.4	300	35	3SUGC-F
ELM5XXX3UYC	AlGaInP	590	YELLOW	WATER CLEAR	30	2.0	2.4	300	20	3UYC-F
ELM5XXX3SUYC	AlGaInP	590	YELLOW	WATER CLEAR	30	2.0	2.4	400	20	3SUYC-F
ELM5XXX3UUYC	AlGaInP	590	YELLOW	WATER CLEAR	30	2.0	2.4	600	35	3UUYC-F
ELM5XXX3UOC	AlGaInP	625	ORANGE	WATER CLEAR	30	1.8	2.4	300	20	3UOC-F
ELM5XXX3SUOC	AlGaInP	625	ORANGE	WATER CLEAR	30	1.8	2.4	400	20	3SUOC-F
ELM5XXX3URC	GaAlAs/GaAs	645	RED	WATER CLEAR	30	1.7	2.4	200	35	3URC-F
ELM5XXX3SURC	AlGaInP	640	RED	WATER CLEAR	30	1.8	2.4	200	20	3SURC-F
ELM5XXX3UWC	InGaN/Sapphire	6500K	WHITE	WATER CLEAR	30	3.2	3.6	6000	35	3UWC1.035C-F

STANDARD TOLERANCE (UNLESS OTHERWISE SPECIFIED) ±10% ALL VALUES		 4 THOMAS, IRVINE, CA. 92618 TEL: (949) 951-8808 FAX: (949) 951-3974	
ANGULAR X° ± 5°		 <b>TITLE:</b> EXTRUDED VERTICAL T-1 (3mm) LED STANDARD PROFILE SPACER ASSY	
DESIGNED: <b>Minh Doan</b>	DATE: <b>07/27/12</b>	<b>PART NO:</b> ELM5XXX3XX	REVISION: <b>T</b>
CHECKED: <b>T. Yin</b>	DATE: <b>07/27/12</b>	<b>CAGE CODE :</b> 32559	<b>SHEET #</b> 3 OF 5
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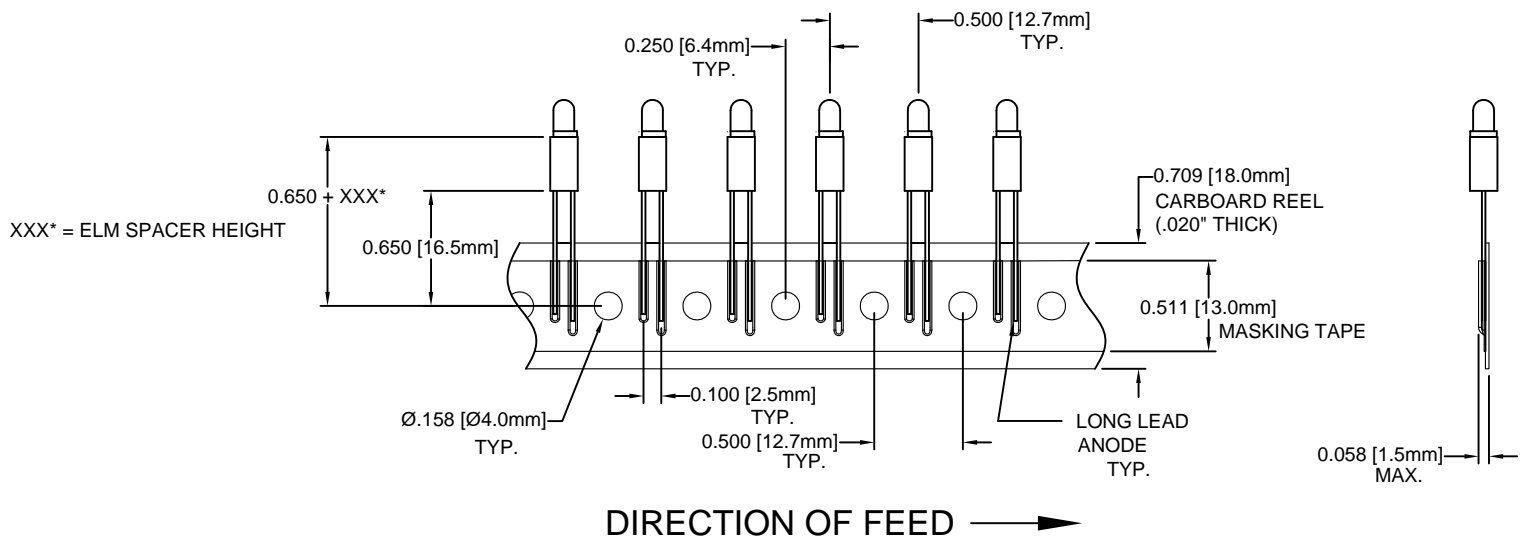
REV.	DESCRIPTION	DATE	APPROVED
	SEE SHEET #1.		

LED Assy. No.	Chip			Lens Appearance	Absolute Max. Ratings			Electro-Optical Data @ 2mA			Viewing Angle 2 θ ½ (Deg)	LED P/N
	Material	Peak Wave Length λp(nm)	Emitted Color		Pd (mW)	If (mA)	Peak If(mA)	Vf (V)		Iv (mcd)		
								TYP	MAX	TYP		
ELM5XXX3BWDL	GaN/siC	430	BLUE	DIFFUSED	20	7	-	3.8	4.2	2.5	35	3BWDL-F
ELM5XXX3GDL	GaP/GaP	568	GREEN	DIFFUSED	10	7	-	2.1	2.6	4.0	35	3GDL-F
ELM5XXX3PGDL	GaP/GaP	555	PURE GREEN	DIFFUSED	10	7	-	2.1	2.6	0.2	35	3PGDL-F
ELM5XXX3YDL	GaAsP/GaP	590	YELLOW	DIFFUSED	10	7	-	2.0	2.6	2.0	35	3YDL-F
ELM5XXX3ADL	GaAsP/GaP	605	AMBER	DIFFUSED	10	7	-	2.0	2.6	4.0	35	3ADL-F
ELM5XXX3HDL	GaAsP/GaP	625	HE RED	DIFFUSED	10	7	-	2.0	2.6	2.5	35	3HDL-F
ELM5XXX3RDL	GaP/GaP	700	RED	DIFFUSED	10	7	-	2.1	2.6	0.5	35	3RDL-F
ELM5XXX3SRDL	GaAlAs/GaAs	645	RED	DIFFUSED	10	7	-	2.0	-	8.0	35	3SRDL-F

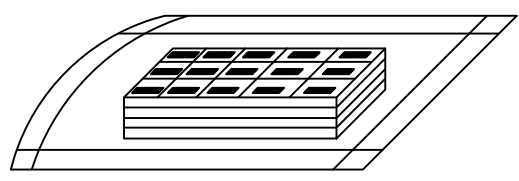
LED Assy. No.	Peak Wave Length λp(nm)	Emitted Color	Lens Appearance	Electro-Optical Data				Viewing Angle 2 θ½ (Deg)	LED P/N
				If (mA)	Vf (V)		Iv (mcd)		
					MAX	TYP	MAX		
<b>5 Volt</b>				<b>Data @ 5V</b>					
ELM5XXX3BWD5V	BLUE	430	DIFFUSED	-	-	5	10	35	3BWD5V-F
ELM5XXX3GC5V	GREEN	568	WATER CLEAR	-	-	5	40	20	3GC5V-F
ELM5XXX3GD5V	GREEN	568	DIFFUSED	-	-	5	25	35	3GD5V-F
ELM5XXX3GT5V	GREEN	568	TINTED	-	-	5	40	20	3GT5V-F
ELM5XXX3AD5V	AMBER	605	DIFFUSED	-	-	5	25	35	3AD5V-F
ELM5XXX3HD5V	HE RED	625	DIFFUSED	-	-	5	30	35	3HD5V-F
ELM5XXX3RD5V	RED	700	DIFFUSED	-	-	5	2	35	3RD5V-F
ELM5XXX3YD5V	YELLOW	590	DIFFUSED	-	-	5	20	35	3YD5V-F
<b>12 Volt</b>				<b>Data @ 12V</b>					
ELM5XXX3GC12V	GREEN	568	WATER CLEAR	-	-	12	40	20	3GC12V-F
ELM5XXX3GD12V	GREEN	568	DIFFUSED	-	-	12	25	35	3GD12V-F
ELM5XXX3HC12V	HE RED	625	WATER CLEAR	-	-	12	50	20	3HC12V-F
ELM5XXX3HD12V	HE RED	625	DIFFUSED	-	-	12	30	35	3HD12V-F
ELM5XXX3RC12V	RED	700	WATER CLEAR	-	-	12	6	20	3RC12V-F
ELM5XXX3RD12V	RED	700	DIFFUSED	-	-	12	2	35	3RD12V-F
ELM5XXX3YC12V	YELLOW	590	WATER CLEAR	-	-	12	40	20	3YC12V-F
ELM5XXX3YD12V	YELLOW	590	DIFFUSED	-	-	12	25	35	3YD12V-F

STANDARD TOLERANCE ( UNLESS OTHERWISE SPECIFIED ) ±10% ALL VALUES		ANGULAR X° ± 5°		 4 THOMAS, IRVINE, CA. 92618 TEL: (949) 951-8808 FAX: (949) 951-3974
DESIGNED: <b>Minh Doan</b>		DATE: <b>07/27/12</b>		
CHECKED: <b>T. Yin</b>		DATE: <b>07/27/12</b>		<b>PART NO:</b> ELM5XXX3XX <b>REVISION:</b> T <b>CAGE CODE :</b> 32559 <b>SHEET #</b> 4 OF 5 <small>CAD GENERATED DOCUMENT. DO NOT MEASURE DRAWING.</small>

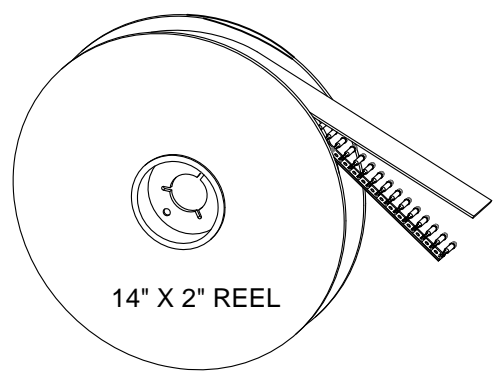
REV.	DESCRIPTION	DATE	APPROVED
	SEE SHEET #1.		



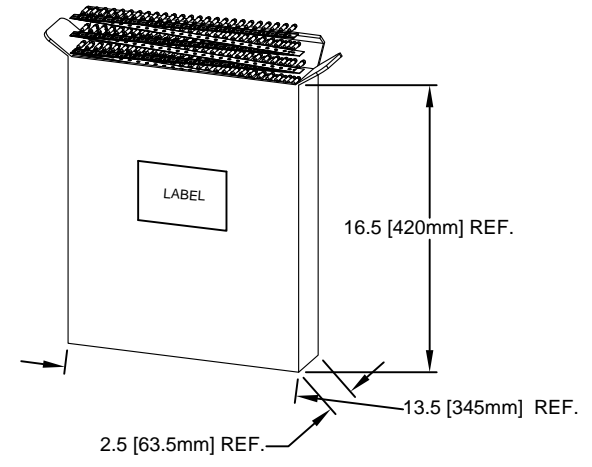
DIRECTION OF FEED →



STANDARD PACKAGING TRAY



TAPE & REEL  
1,000 pcs / reel



AMMO PACK  
2,000 pcs / box

- NOTE:
1. STANDARD PART NUMBERS ARE PACKAGED IN LOOSE PIECES USING PACKAGING TRAYS
  2. ADD "T" SUFFIX TO PART NUMBER FOR TAPE AND REEL PACKAGING OPTION (1,000 PCS/REEL)
  3. ADD "A" SUFFIX TO PART NUMBER FOR AMMO PACK OPTION (2,000 PCS/BOX)
  4. TAPE AND REEL PACKAGING COMPLY TO EIA-468-C

STANDARD TOLERANCE (UNLESS OTHERWISE SPECIFIED)		 4 THOMAS, IRVINE, CA. 92618 TEL: (949) 951-8808 FAX: (949) 951-3974	
DECIMALS	ANGULAR		
.X ± .1	X° ± 1°		<b>TITLE:</b> EXTRUDED VERTICAL T-1 (3mm) LED STANDARD PROFILE SPACER ASSY
.XX ± .02			
.XXX ± .010		<b>DESIGNED:</b> Minh Doan <b>DATE:</b> 07/27/12	<b>PART NO:</b> ELM5XXX3XX <b>REVISION:</b> T
<b>CHECKED:</b> T. Yin <b>DATE:</b> 07/27/12	<b>CAGE CODE :</b> 32559 <b>SHEET #</b> 5 OF 5	CAD GENERATED DOCUMENT. DO NOT MEASURE DRAWING.	

## BIVAR:

ELM50303GD ELM50403YD ELM50503GD ELM50503GDL ELM50603GD ELM50603GDL ELM50603HDL  
ELM50603YDL ELM50703GD ELM50703RD ELM50703YD ELM50753GD ELM50753YD ELM50803GD  
ELM50903RD ELM51003GD ELM51003GDL ELM51003HD ELM51003HDL ELM51003RD ELM51003YD  
ELM51003YDL ELM51053HDL ELM510MM3GD ELM510MM3GDL ELM510MM3HD ELM510MM3HDL  
ELM510MM3RD ELM510MM3YD ELM510MM3YDL ELM51103HDL ELM51153GD ELM51153HD ELM51203GD  
ELM51203GDL ELM51203HD ELM51203YDL ELM51205GD ELM51253GD ELM51253RD ELM512MM3GD  
ELM512MM3GDL ELM512MM3HDL ELM512MM3YDL ELM51353GD ELM51403BC ELM51403GD ELM51403RD  
ELM51403YD ELM51453HDL ELM51503GD ELM51503GDL ELM51503HD ELM51503HDL ELM51503YDL  
ELM51553GD ELM51553YD ELM515MM3BC ELM515MM3GD ELM515MM3GDL ELM515MM3HDL  
ELM515MM3RD ELM515MM3YD ELM51603GDL ELM51603HDL ELM51603RDL ELM51603YDL ELM51703BC-  
Y/G ELM51703GD ELM51703HD ELM51703SRD ELM51803YDL ELM51903GD ELM51903GDL ELM51903HD  
ELM51903RD ELM51903YDL ELM519MM3GDL ELM519MM3HDL ELM519MM3YDL ELM52003GD ELM52003HD  
ELM52003HDL ELM52003RD ELM52003YD ELM52053GD ELM52053RD ELM52053YD ELM520MM3GD  
ELM520MM3RD ELM52153HD ELM52153RD ELM52303GDL ELM52303SRC ELM52353GD ELM52353HD  
ELM52453GDL ELM52453HDL ELM52453YDL ELM52503BWD