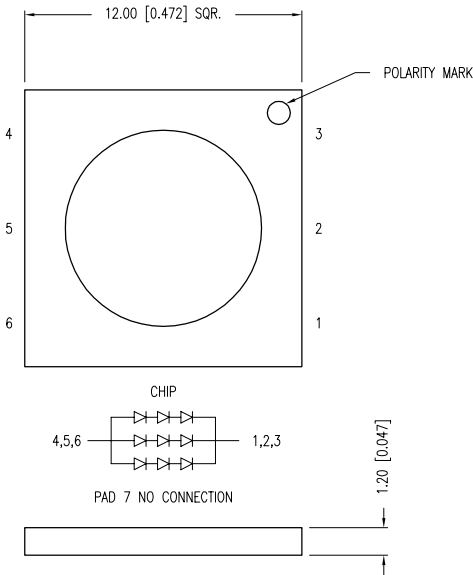


| ELECTRO-OPTICAL CHARACTERISTICS $T_A=25^{\circ}\text{C}$ $I_f=1000\text{mA}$ |                  |      |      |      |                        |
|------------------------------------------------------------------------------|------------------|------|------|------|------------------------|
| PARAMETER                                                                    | SYMBOL           | MIN  | TYP  | MAX  | UNITS TEST COND        |
| FORWARD VOLTAGE                                                              | $V_f$            |      | 10.4 | 11.5 | V $I_f=1000\text{mA}$  |
| REVERSE VOLTAGE                                                              | $V_r$            | 15   |      |      | V $I_r=10\mu\text{A}$  |
| LUMINOUS FLUX                                                                | $I_v$            | 430  | 550  |      | lm $I_f=1000\text{mA}$ |
| COLOR TEMPERATURE                                                            |                  | 3710 | 4000 | 4260 | $^{\circ}\text{K}$     |
| VIEWING ANGLE                                                                |                  |      | 120  |      | 2x theta               |
| EMITTED COLOR:                                                               | NEUTRAL WHITE    |      |      |      |                        |
| EPOXY LENS FINISH:                                                           | WATER CLEAR LENS |      |      |      |                        |

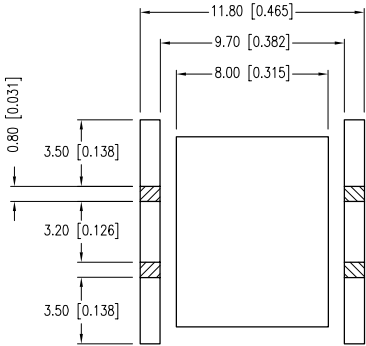
| LIMITS OF SAFE OPERATION AT $25^{\circ}\text{C}$ |             |                    |
|--------------------------------------------------|-------------|--------------------|
| PARAMETER                                        | MAX         | UNITS              |
| PEAK FORWARD CURRENT                             | 1200        | mA                 |
| STEADY CURRENT                                   | 1000        | mA                 |
| POWER DISSIPATION                                | 11.5        | mW                 |
| OPERATING TEMP.                                  | -40 TO +90  | $^{\circ}\text{C}$ |
| STORAGE TEMP.                                    | -40 TO +100 | $^{\circ}\text{C}$ |

| THERMAL PARAMETERS                   |      |                        |
|--------------------------------------|------|------------------------|
| PARAMETER                            | MAX  | UNITS                  |
| JUNCTION TEMPERATURE                 | 110  | $^{\circ}\text{C}$     |
| THERMAL RESISTANCE (JUNCTION/SOLDER) | 3.5  | $^{\circ}\text{C/W}$   |
| TEMPERATURE COEFFICIENT OF $V_f$     | -5.6 | mV/ $^{\circ}\text{C}$ |

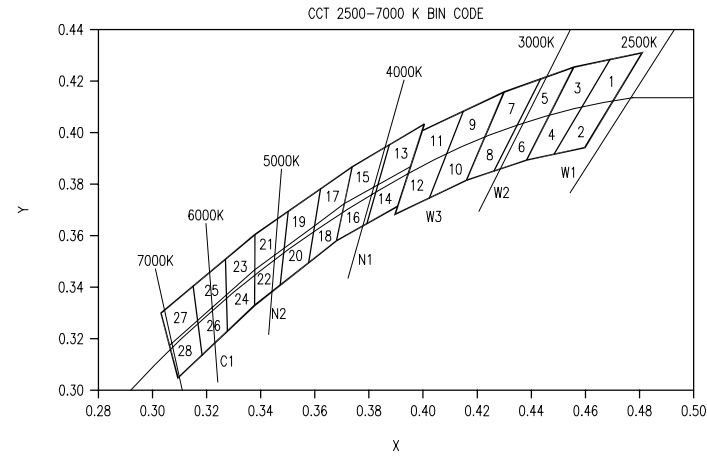
CAUTION: MOISTURE SENSITIVE DEVICE  
PER JEDEC LEVEL 2 STANDARDS

CAUTION: STATIC SENSITIVE DEVICE  
FOLLOW PROPER E.S.D. HANDLING PROCEDURES  
WHEN WORKING WITH THIS PART.

RECOMMENDED SOLDER PAD LAYOUT



\*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN= +DECIMAL PRECISION MAX.= +0.00 -0.00 DECIMAL PRECISION



| COLOR      | GROUP | CHROMATICITY REGIONS | MIN. | TYP. | MAX. |
|------------|-------|----------------------|------|------|------|
| WARM WHITE | W1    | 1,2,3,4              | 2580 | 2700 | 2870 |
|            | W2    | 5,6,7,8              | 2870 | 3000 | 3220 |
|            | W3    | 9,10,11,12           | 3220 | 3500 | 3710 |
| WARM WHITE | N1    | 13,14,15,16          | 3710 | 4000 | 4260 |
|            | N2    | 17,18,19,20,21,22    | 4260 | 4700 | 5310 |
| COOL WHITE | C1    | 23,24,25,26,27,28    | 5310 | 6000 | 7040 |

| X Y |        |        | X Y |        |        | X Y |        |        | X Y |        |        | X Y |        |        | X Y |        |        |
|-----|--------|--------|-----|--------|--------|-----|--------|--------|-----|--------|--------|-----|--------|--------|-----|--------|--------|
| 1   | 0.4582 | 0.4099 | 6   | 0.4259 | 0.3853 | 11  | 0.3941 | 0.3848 | 16  | 0.3670 | 0.3578 | 21  | 0.3496 | 0.3702 | 26  | 0.3265 | 0.3371 |
|     | 0.4687 | 0.4289 |     | 0.4342 | 0.4028 |     | 0.3996 | 0.4015 |     | 0.3702 | 0.3722 |     | 0.3376 | 0.3616 |     | 0.3160 | 0.3274 |
|     | 0.4813 | 0.4319 |     | 0.4465 | 0.4071 |     | 0.4146 | 0.4089 |     | 0.3825 | 0.3798 |     | 0.3370 | 0.3472 |     | 0.3175 | 0.3139 |
|     | 0.4700 | 0.4126 |     | 0.4373 | 0.3893 |     | 0.4080 | 0.3916 |     | 0.3783 | 0.3646 |     | 0.3481 | 0.3557 |     | 0.3270 | 0.3230 |
| 2   | 0.4483 | 0.3919 | 7   | 0.4221 | 0.3984 | 12  | 0.3889 | 0.3690 | 17  | 0.3736 | 0.3874 | 22  | 0.3481 | 0.3557 | 27  | 0.3144 | 0.3408 |
|     | 0.4582 | 0.4099 |     | 0.4299 | 0.4165 |     | 0.3941 | 0.3848 |     | 0.3616 | 0.3788 |     | 0.3370 | 0.3472 |     | 0.3028 | 0.3304 |
|     | 0.4700 | 0.4126 |     | 0.4430 | 0.4212 |     | 0.4080 | 0.3916 |     | 0.3592 | 0.3641 |     | 0.3364 | 0.3328 |     | 0.3055 | 0.3177 |
|     | 0.4593 | 0.3944 |     | 0.4342 | 0.4028 |     | 0.4017 | 0.3751 |     | 0.3703 | 0.3726 |     | 0.3466 | 0.3411 |     | 0.3160 | 0.3274 |
| 3   | 0.4465 | 0.4071 | 8   | 0.4147 | 0.3814 | 13  | 0.3825 | 0.3798 | 18  | 0.3703 | 0.3726 | 23  | 0.3376 | 0.3616 | 28  | 0.3160 | 0.3274 |
|     | 0.4562 | 0.4260 |     | 0.4221 | 0.3984 |     | 0.3869 | 0.3959 |     | 0.3592 | 0.3641 |     | 0.3260 | 0.3512 |     | 0.3055 | 0.3177 |
|     | 0.4687 | 0.4289 |     | 0.4342 | 0.4028 |     | 0.4006 | 0.4044 |     | 0.3568 | 0.3495 |     | 0.3265 | 0.3371 |     | 0.3081 | 0.3049 |
|     | 0.4582 | 0.4099 |     | 0.4259 | 0.3853 |     | 0.3950 | 0.3875 |     | 0.3670 | 0.3578 |     | 0.3370 | 0.3472 |     | 0.3175 | 0.3139 |
| 4   | 0.4373 | 0.3893 | 9   | 0.4080 | 0.3916 | 14  | 0.3783 | 0.3646 | 19  | 0.3616 | 0.3788 | 24  | 0.3370 | 0.3472 |     |        |        |
|     | 0.4465 | 0.4071 |     | 0.4146 | 0.4089 |     | 0.3825 | 0.3798 |     | 0.3496 | 0.3702 |     | 0.3265 | 0.3371 |     |        |        |
|     | 0.4582 | 0.4099 |     | 0.4299 | 0.4165 |     | 0.3950 | 0.3875 |     | 0.3481 | 0.3557 |     | 0.3270 | 0.3230 |     |        |        |
|     | 0.4483 | 0.3919 |     | 0.4221 | 0.3984 |     | 0.3898 | 0.3716 |     | 0.3592 | 0.3641 |     | 0.3364 | 0.3328 |     |        |        |
| 5   | 0.4342 | 0.4028 | 10  | 0.4017 | 0.3751 | 15  | 0.3702 | 0.3722 | 20  | 0.3592 | 0.3641 | 25  | 0.3260 | 0.3512 |     |        |        |
|     | 0.4430 | 0.4212 |     | 0.4080 | 0.3916 |     | 0.3736 | 0.3874 |     | 0.3481 | 0.3557 |     | 0.3144 | 0.3408 |     |        |        |
|     | 0.4562 | 0.4260 |     | 0.4221 | 0.3984 |     | 0.3869 | 0.3958 |     | 0.3466 | 0.3411 |     | 0.3160 | 0.3274 |     |        |        |
|     | 0.4465 | 0.4071 |     | 0.4147 | 0.3814 |     | 0.3825 | 0.3798 |     | 0.3568 | 0.3495 |     | 0.3265 | 0.3371 |     |        |        |

\*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN.= +DECIMAL PRECISION -0.00 MAX.= +0.00 -DECIMAL PRECISION

UNCONTROLLED DOCUMENT



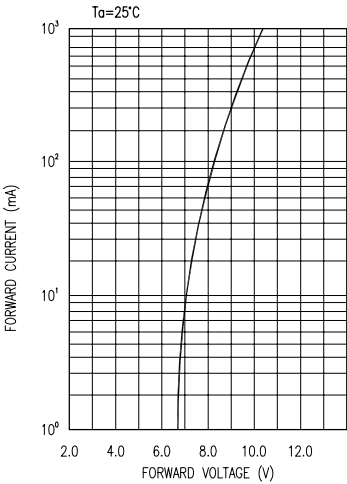
290 E. HELEN ROAD  
PALATINE, IL 60067-6976  
PHONE: +1.847.359.2790  
FAX: +1.847.359.6538  
WEB: WWW.LUMEX.COM

12mm x 12mm SURFACE MOUNT LED, NEUTRAL WHITE.

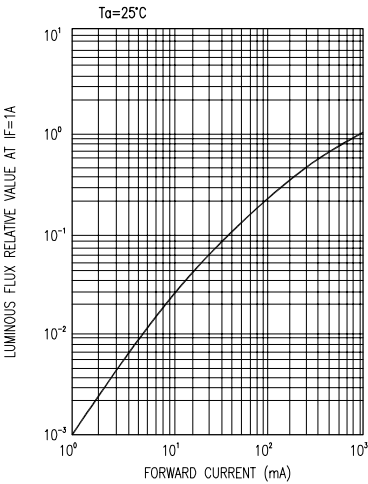
\*\*THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICE DUE TO NEW MATERIALS OR PRODUCT IMPROVEMENT.\*\*

CONFIDENTIAL INFORMATION  
THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY LUMEX INC., THE HOLDER OF THIS DOCUMENT SHALL  
KEEP ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL AND SHALL PROTECT SAME IN WHOLE OR IN PART FROM DISCLOSURE AND DISSEMINATION TO ALL THIRD PARTIES.

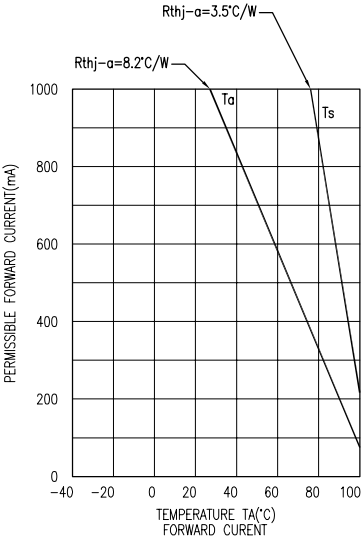
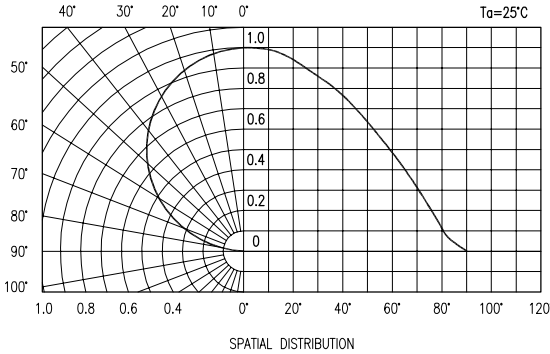
|        |           |           |    |
|--------|-----------|-----------|----|
| DATE:  | 02.04.11  | DRAWN BY: | AB |
| PAGE:  | 3 OF 4    | CHKD BY:  | KF |
| SCALE: |           | APRVD BY: | BC |
| UNIT:  | mm [INCH] |           | Ⓟ  |



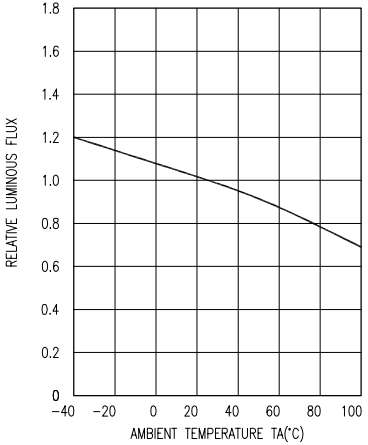
FORWARD CURRENT VS FORWARD VOLTAGE



LUMINOUS FLUX VS FORWARD CURRENT



DERATING CURVE



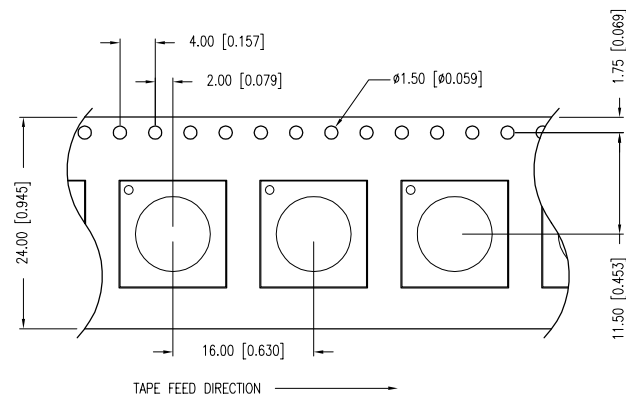
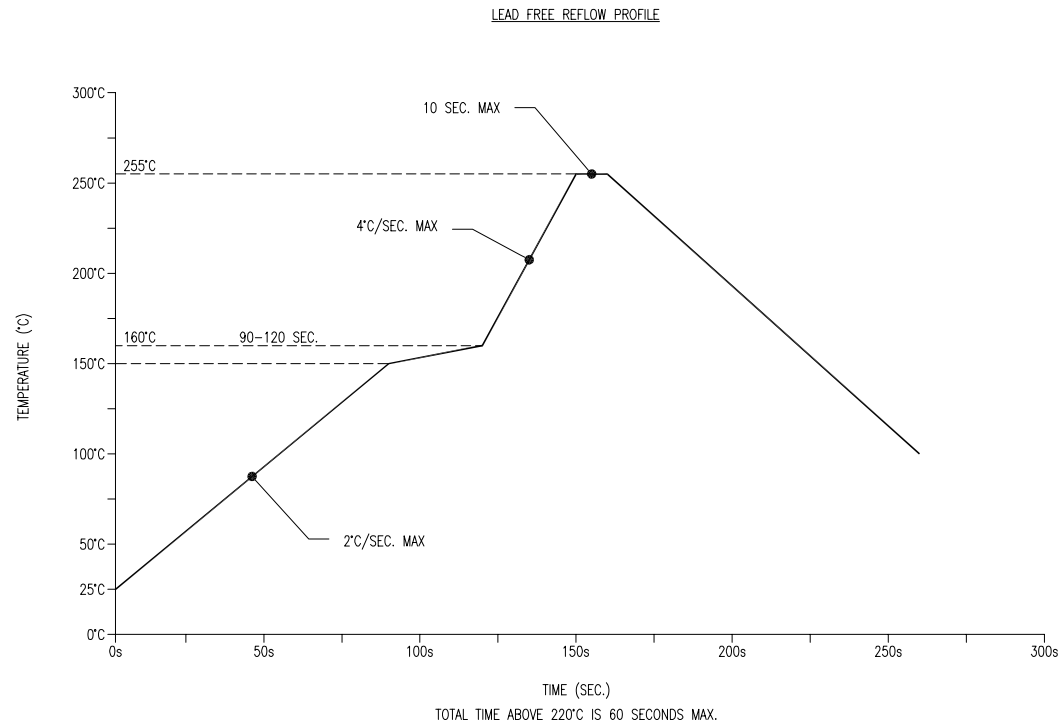
LUMINOUS FLUX VS AMBIENT TEMPERATURE

\*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN.= +DECIMAL PRECISION -0.00 MAX.= +0.00 -DECIMAL PRECISION

**LUMEX**  
Creating LED and LCD Solutions Together™

290 E. HELEN ROAD  
PALATINE, IL 60067-6976  
PHONE: +1.847.359.2790  
FAX: +1.847.359.6538  
WEB: WWW.LUMEX.COM

|                                                                                                                                                                                                                                                                                                                                                          |  |                 |              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------|--------------|
| 12mm x 12mm SURFACE MOUNT LED, NEUTRAL WHITE.                                                                                                                                                                                                                                                                                                            |  | DATE: 02.04.11  | DRAWN BY: AB |
| **THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICE DUE TO NEW MATERIALS OR PRODUCT IMPROVEMENT.**                                                                                                                                                                                                                                                |  | PAGE: 2 OF 4    | CHKD BY: KF  |
| CONFIDENTIAL INFORMATION<br>THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY LUMEX INC., THE HOLDER OF THIS DOCUMENT SHALL KEEP ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL AND SHALL PROTECT SAME IN WHOLE OR IN PART FROM DISCLOSURE AND DISSEMINATION TO ALL THIRD PARTIES. |  | SCALE:          | APRVD BY: BC |
|                                                                                                                                                                                                                                                                                                                                                          |  | UNIT: mm [INCH] | Ⓟ            |



\*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN=  $\begin{matrix} +\text{DECIMAL PRECISION} \\ -0.00 \end{matrix}$  MAX.=  $\begin{matrix} +0.00 \\ -\text{DECIMAL PRECISION} \end{matrix}$  UNCONTROLLED DOCUMENT



290 E. HELEN ROAD  
PALATINE, IL 60067-6976  
PHONE: +1.847.359.2790  
FAX: +1.847.359.6538  
WEB: WWW.LUMEX.COM

12mm x 12mm SURFACE MOUNT LED, NEUTRAL WHITE.

\*\*THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICE DUE TO NEW MATERIALS OR PRODUCT IMPROVEMENT.\*\*

CONFIDENTIAL INFORMATION

THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY LUMEX INC., THE HOLDER OF THIS DOCUMENT SHALL KEEP ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL AND SHALL PROTECT SAME IN WHOLE OR IN PART FROM DISCLOSURE AND DISSEMINATION TO ALL THIRD PARTIES.

|        |           |           |    |
|--------|-----------|-----------|----|
| DATE:  | 02.04.11  | DRAWN BY: | AB |
| PAGE:  | 4 OF 4    | CHKD BY:  | KF |
| SCALE: |           | APRVD BY: | BC |
| UNIT:  | mm [INCH] |           | Ⓟ  |

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Lumex:

[SML-LX4747NWC-TR10](#)