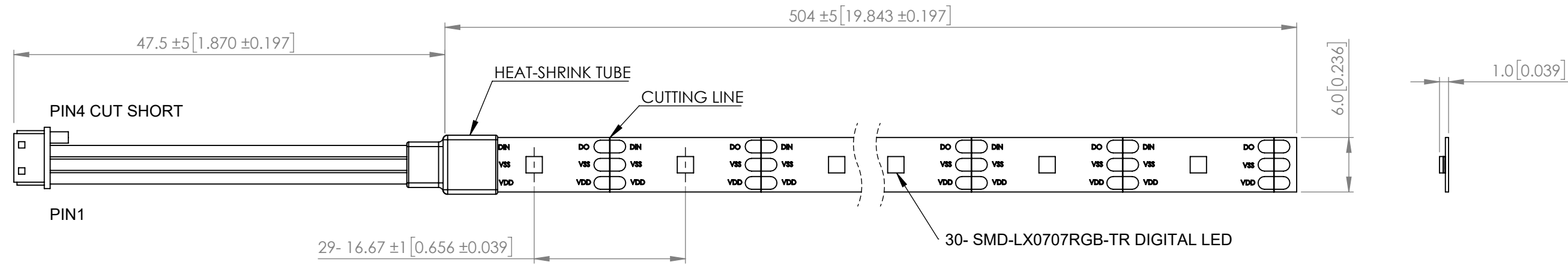


|            |  |                                            |  |                    |  |                 |  |             |          |
|------------|--|--------------------------------------------|--|--------------------|--|-----------------|--|-------------|----------|
|            |  |                                            |  | <b>PART NUMBER</b> |  | SMS-50006-30-N5 |  | <b>REV</b>  | <b>B</b> |
| <b>REV</b> |  | <b>E.C.N. NUMBER AND REVISION COMMENTS</b> |  |                    |  |                 |  | <b>DATE</b> |          |
| A          |  | ECN-Lumex201900076                         |  |                    |  |                 |  | 06.21.19    |          |
| B          |  | ECN-Lumex202000030                         |  |                    |  |                 |  | 04.30.20    |          |



ELECTRO-OPTICAL CHARACTERISTIC TA=25℃ PER SMD-LX0707RGB-TR DIGITAL LED

| PARAMETER           |     | MIN    | TYP | MAX    | UNITS       | TEST COND |
|---------------------|-----|--------|-----|--------|-------------|-----------|
| SUPPLY VOLTAGE      | VDD | -      | 5   | -      | V           | -         |
| INPUT VOLTAGE(HIGH) | VIH | 0.7VDD | -   | VDD    | V           | -         |
| INPUT VOLTAGE(LOW)  | VIL | 0      | -   | 0.3VDD | V           | -         |
| PEAK WAVELENGTH     | R   | -      | 630 | -      | nm          | If=5mA    |
|                     | G   | -      | 520 | -      |             |           |
|                     | B   | -      | 470 | -      |             |           |
| LUMINOUS INTENSITY  | R   | 72     | -   | 180    | mcd         | If=5mA    |
|                     | G   | 180    | -   | 360    |             |           |
|                     | B   | 28.5   | -   | 72     |             |           |
| VIEWING ANGLE       |     | -      | 120 | -      | 2x theta1/2 | If=5mA    |

PIN ASSIGNMENT

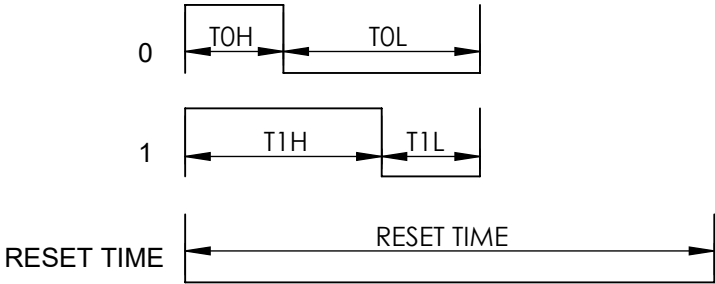
| PIN # | COLOR | SYMBOL |
|-------|-------|--------|
| 1     | RED   | VDD    |
| 2     | BLACK | VSS    |
| 3     | BLUE  | DIN    |

\*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= <sup>+DECIMAL PRECISION</sup><sub>-0.00</sub> MAX= <sup>+0.00</sup><sub>-DECIMAL PRECISION</sub>

RECOMMENDED OPERATING CONDITION Ta=-20~70℃ , VSS=0V

| PARAMETER              |      | MIN | TYP | MAX | UNITS | TEST COND                    |
|------------------------|------|-----|-----|-----|-------|------------------------------|
| PROPAGATION DELAY TIME | TPLZ | -   | -   | 300 | ns    | DIN→DOUT<br>CL=15pF, RL=10KΩ |
|                        | TTHZ | -   | -   | 20  | us    | CL=300pF<br>OUTR/OUTG/OUTB   |
| INPUT CAPACITOR        | Tci  | -   | -   | 15  | pf    |                              |

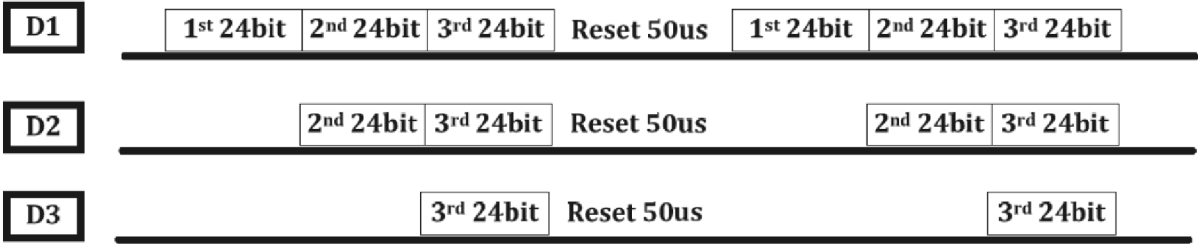
TIMING WAVE FORM



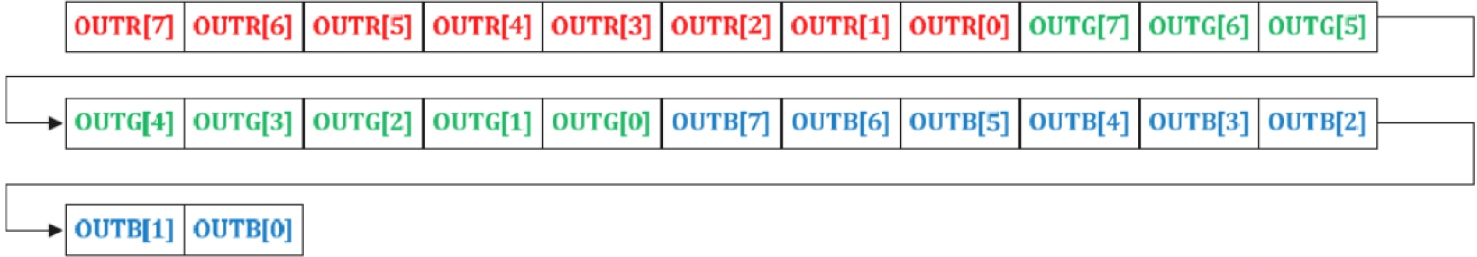
HIGH SPEED MODE

| ITEM | DESCRIPTION             | TYP.  | ALLOWANCE |
|------|-------------------------|-------|-----------|
| T0H  | 0 CODE, HIGH-LEVEL TIME | 300ns | ±80ns     |
| T0L  | 0 CODE, LOW-LEVEL TIME  | 900ns | ±80ns     |
| T1H  | 1 CODE, HIGH-LEVEL TIME | 900ns | ±80ns     |
| T1L  | 1 CODE, LOW-LEVEL TIME  | 300ns | ±80ns     |
| RES  | RESET TIME              | >50us | -         |

DATA COMMUNICATION



SINGLE DATA IN 24BIT FOR RGB



\*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= <sup>+DECIMAL PRECISION</sup><sub>-0.00</sub> MAX.= <sup>+0.00</sup><sub>-DECIMAL PRECISION</sub>