# Super-luminosity/High-luminosity Numeric LED

## ■ Super-luminosity/High-luminosity Numeric LED **Figures shown below are values per segment.**

(Ta=25˚C)

| Digit | Type | Character height (mm) | Type of display | *1Common pins | U (Red) | | T (Red) | | Outline dimensions | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Model No. | Luminous intensity (mcd) TYP. | Model No. | Luminous intensity (mcd) TYP. | Page | Figure |
| 1-digit | Mold Type | 8.0 | 8. | A | | | GL9T030 | 4.0 | → | 10 |
| | | | | K | | | GL8T030 | 4.0 | | |
| | | 10.16 | 8. | A | | | GL9T040 | 4.25 | | 9 |
| | | | | K | | | GL8T040 | 4.25 | | |
| | | 14.12 | 8. | A | | | GL9T156 | 5.25 | | 8 |
| | | | | K | | | GL8T156 | 5.25 | | |
| | | 20.32 | 8. | A | | | GL9T08 | 2.2 | | 6 |
| | | | | K | | | GL8T08 | 2.2 | | |
| | | 25.4 | 8. | A | GL9U100 | 35.0 | GL9T100 | 9.5 | → | 4 |
| | | | | K | GL8U100 | 35.0 | GL8T100 | 9.5 | | |
| | | 38.1 | 8. | A | GL9U15 | 27.0 | | | | 3 |
| | | | | K | GL8U15 | 27.0 | | | | |
| | Substrate Type | 76.0 | 8. | A | GL9U30 | (120)* | | | | 1 |
| | | | | K | GL8U30 | (120)* | | | | |
| Multi-digits | Mold Type | 10.16 | 8.8. | A | | | GL7T201 | 4.25 | → | 12 |
| | | | | K | | | GL6T201 | 4.25 | | |
| | | 8.0 | 8.8.8.8. | A | | | GL3T422 | 1.5 | → | 19 |
| | | | | K | | | GL3T421 | 1.5 | | |
| | | 7.6 | 8.8.8.8.8. | A | | | GL3T508D | 1.5 | | 21 |
| | | | | K | | | GL3T507D | 1.5 | | |

*1 A: Anode common K: Cathode common * Production after order confirmation

* As for current conditions, refer to $I_F$ in electro-optical characteristics

## ■ Absolute Maximum Ratings **Figures shown below are values per segment.**

(Ta=25˚C)

| Character height (mm) | Radiation color | Forward current $I_F$ (mA) | Peak forward current $I_{FM}$*1 (mA) | Derating factor (mA/ ˚C) DC | Derating factor (mA/ ˚C) Pulse | Reverse voltage $V_R$ (V) | Operating temperature $T_{opr.}$ (˚C) | Storage temperature $T_{stg.}$ (˚C) |
|---|---|---|---|---|---|---|---|---|
| 8.0/10.16/14.12/20.32 | T | 20 | 100 | 0.36 | 1.82 | 5 | -30 to +70 | -40 to +80 |
| 25.4, 38.1, 76.0 | U | 20 | 150*2 | 0.36 | 2.73 | 6 | -30 to +70 | -40 to +80 |
| 25.4, 38.1 | T | 20 | 100 | 0.36 | 1.82 | 5 | -30 to +70 | -40 to +80 |

*1 Duty ratio=1/10, Pulse width=0.1ms

*2 U type duty ratio=1/16, pulse width=0.1ms

## ■ Electro-optical Characteristics **Figures shown below are values per segment.**

(Ta=25˚C)

| Character height (mm) | Radiation color | Forward current $V_F$ TYP. | Forward current $V_F$ MAX | Peak emission wavelength $\lambda p$(nm) TYP. | Spectrum radiation bandwidth $\Delta\lambda$(nm) TYP. | $I_F$ (mA) | Reverse current $I_R$(μA) MAX. | $V_R$ (V) |
|---|---|---|---|---|---|---|---|---|
| 8.0/10.16/14.12/20.32 | T | 1.7 | 2.2 | 660 | 20 | 10 | 10 | 4 |
| 25.4, 38.1, 76.0 | U | 3.5 | 4.8 | 660 | 20 | 10 | 100 | 5 |
| 25.4, 38.1 | T | 3.4 | 4.4 | 660 | 20 | 10 | 10 | 4 |

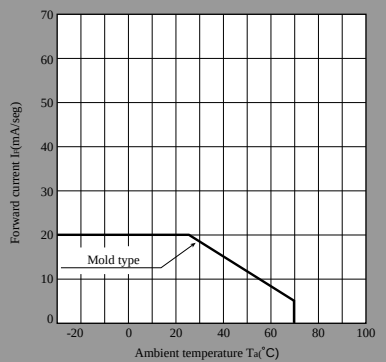
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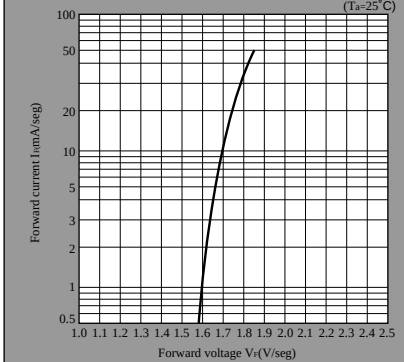
# **Numeric LED** Characteristics Diagrams

T series

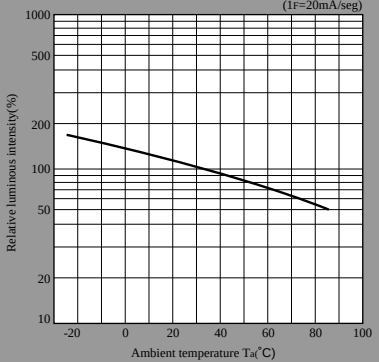
## Forward Current Derating Curve



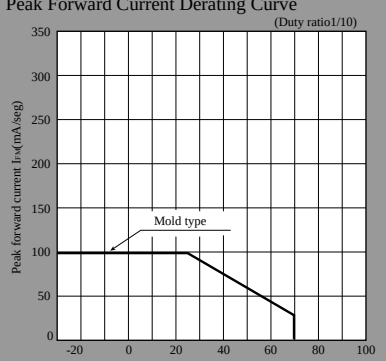

## Forward Current vs. Forward Voltage*



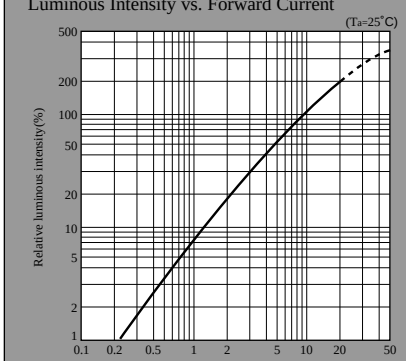

## Luminous Intensity vs. Ambient Temperature



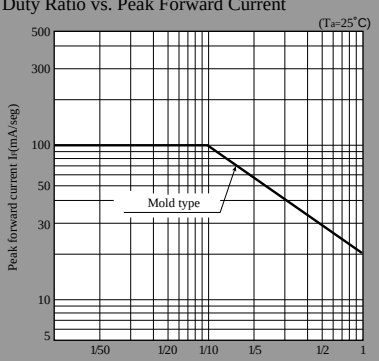

## Peak Forward Current Derating Curve




## Luminous Intensity vs. Forward Current



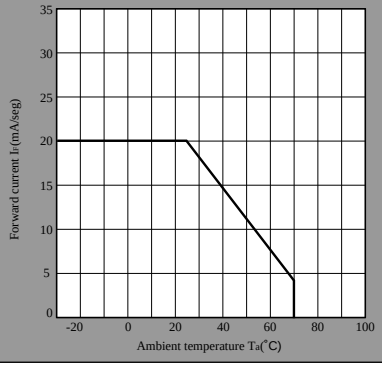

## Duty Ratio vs. Peak Forward Current



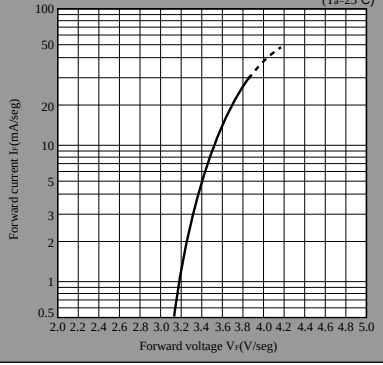

* In case of 25.4mm: value per 1segment 1chip

## U series

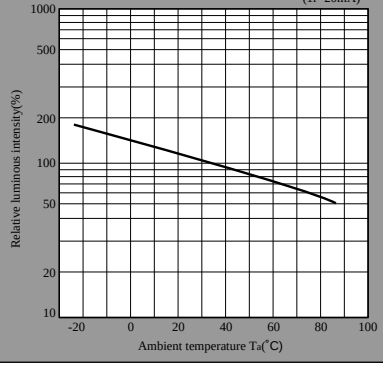
### Forward Current Derating Curve



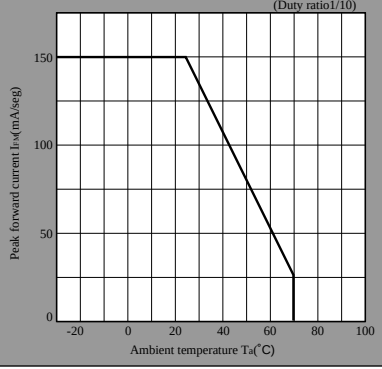

### Forward Current vs. Forward Voltage*



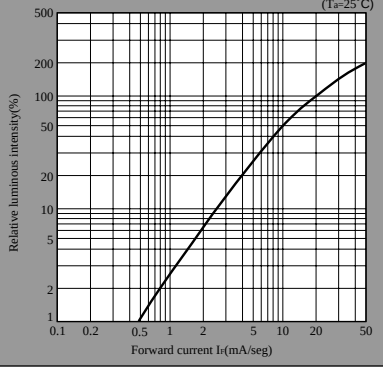

### Luminous Intensity vs. Ambient Temperature



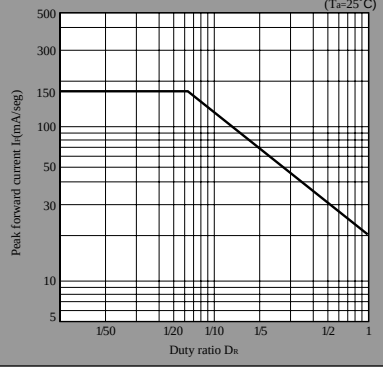

### Peak Forward Current Derating Curve




### Luminous Intensity vs. Forward Current




### Duty Ratio vs. Peak Forward Current

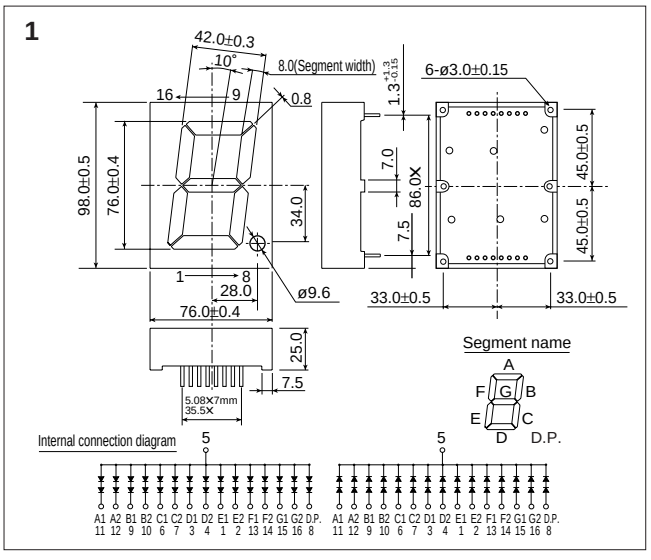



* In case of 25.4/38.1/76.0mm: value per 1segment 1chip

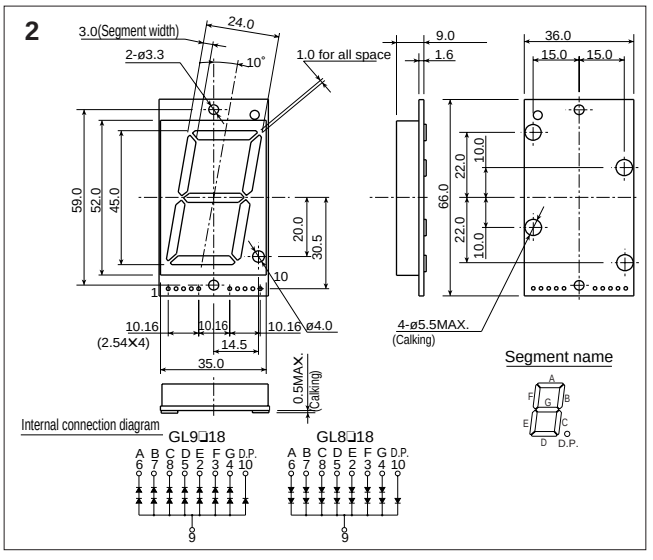

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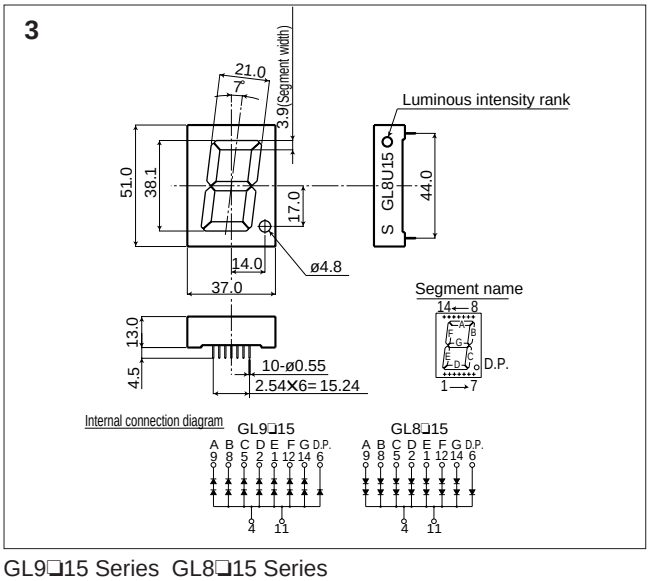
# **Numeric LED** Outline Dimensions(Unit:mm)



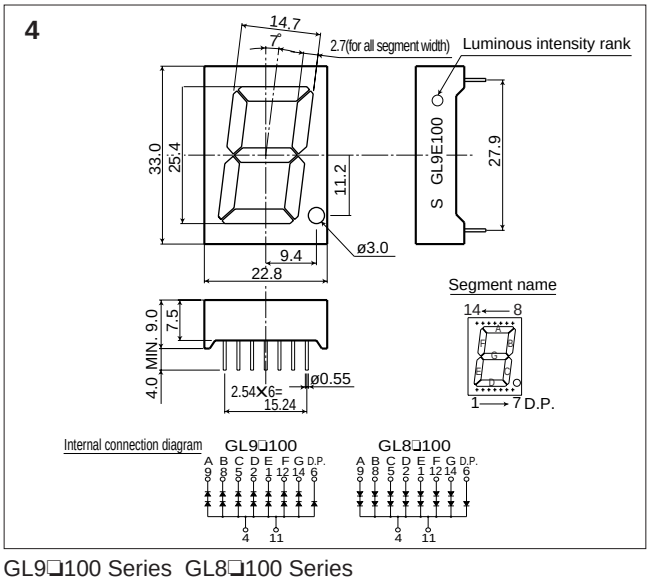

GL9❑30 Series GL8❑30 Series



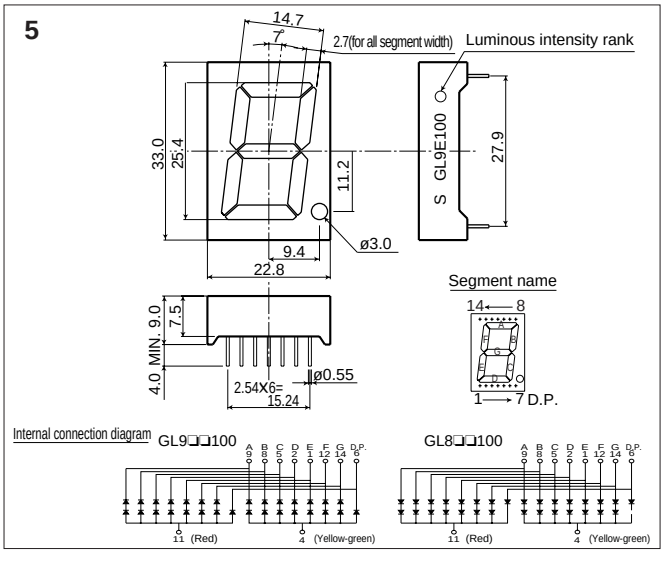

GL9❑18 Series GL8❑18 Series



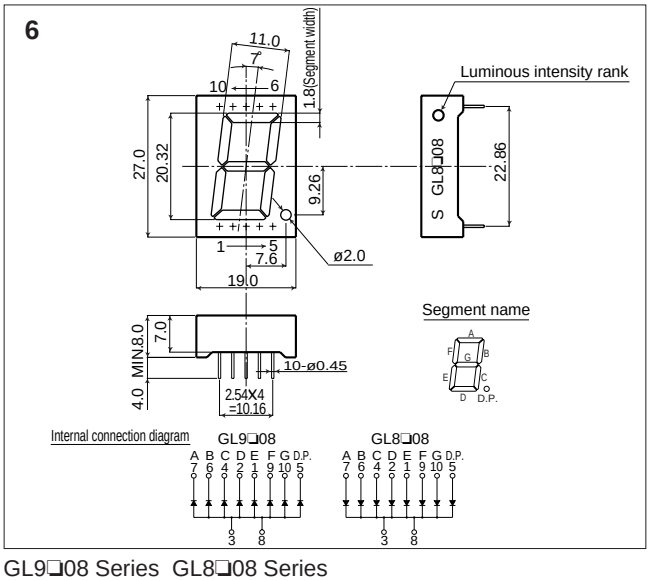

GL9❑15 Series GL8❑15 Series




GL9❑100 Series GL8❑100 Series




GL9❑❑100 Series GL8❑❑100 Series



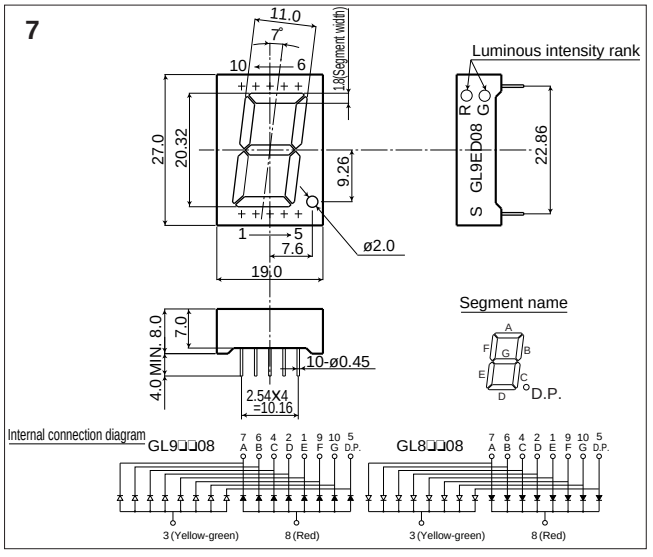

GL9❑08 Series GL8❑08 Series

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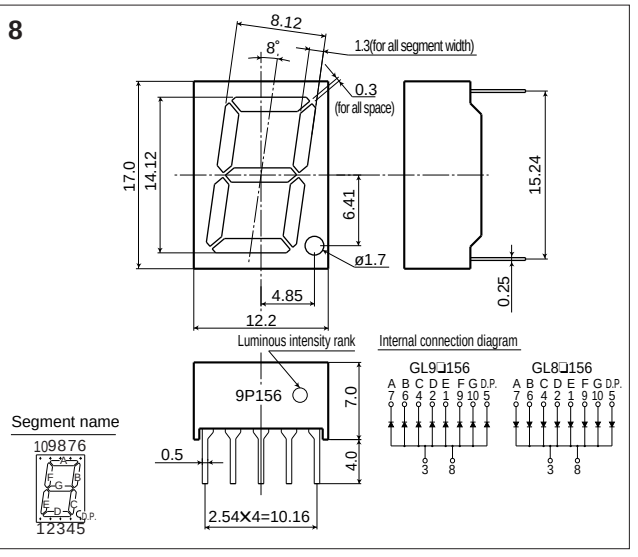
# Numeric LED Outline Dimensions(Unit:mm)

**7**



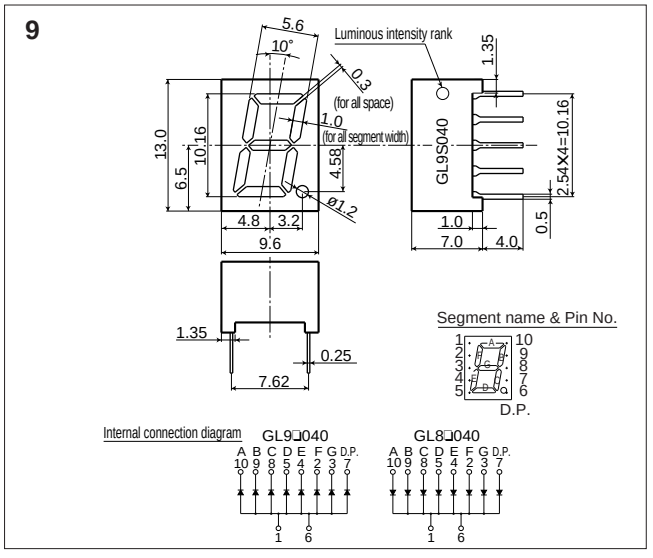

GL9❑❑08 Series GL8❑❑08 Series

**8**



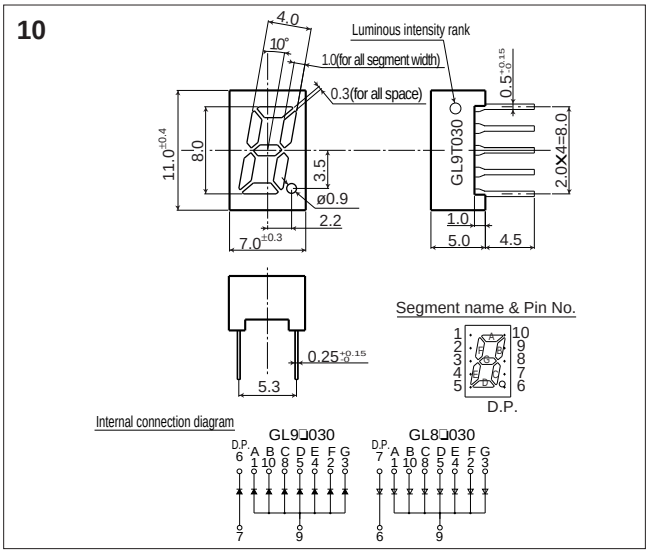

GL9❑156 Series GL8❑156 Series

**9**



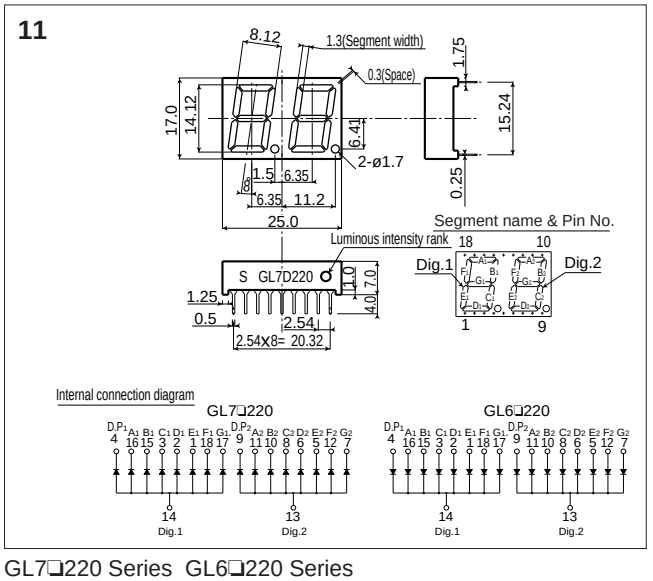

GL9❑040 Series GL8❑040 Series

**10**



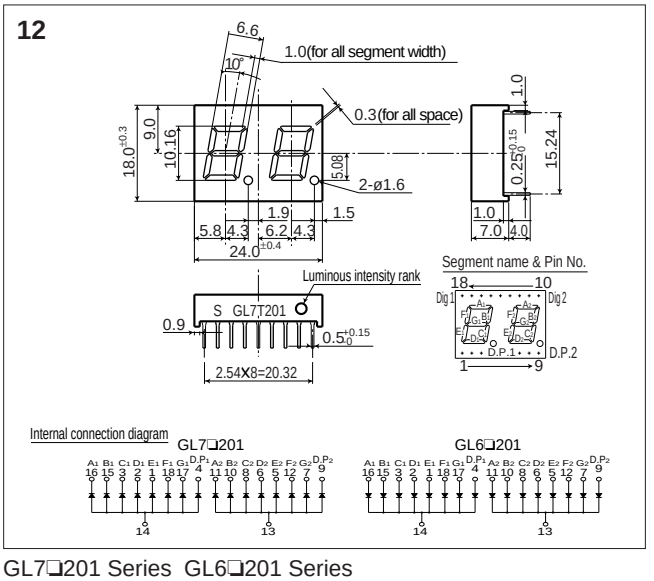

GL9❑030 Series GL8❑030 Series

**11**




GL7❑220 Series GL6❑220 Series

**12**



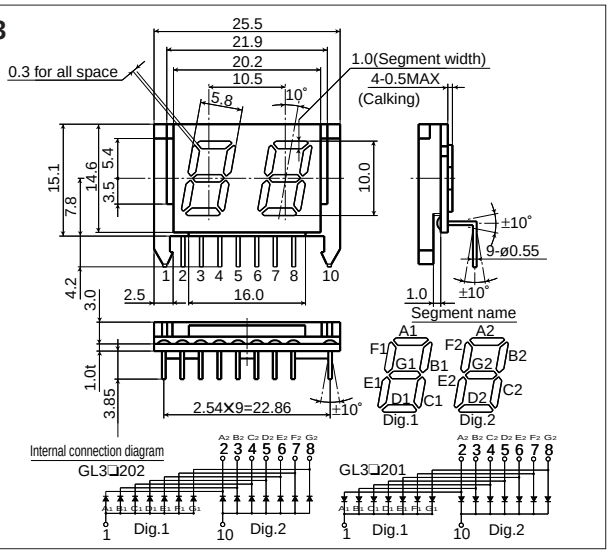

GL7❑201 Series GL6❑201 Series

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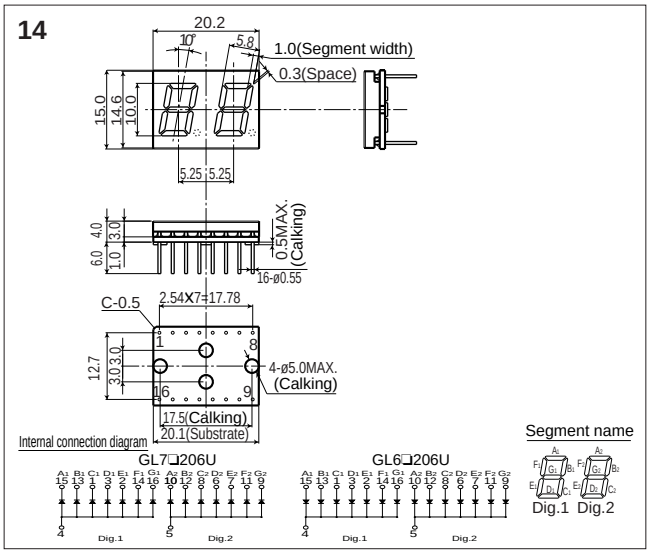
# Numeric LED Outline Dimensions(Unit:mm)

**13**



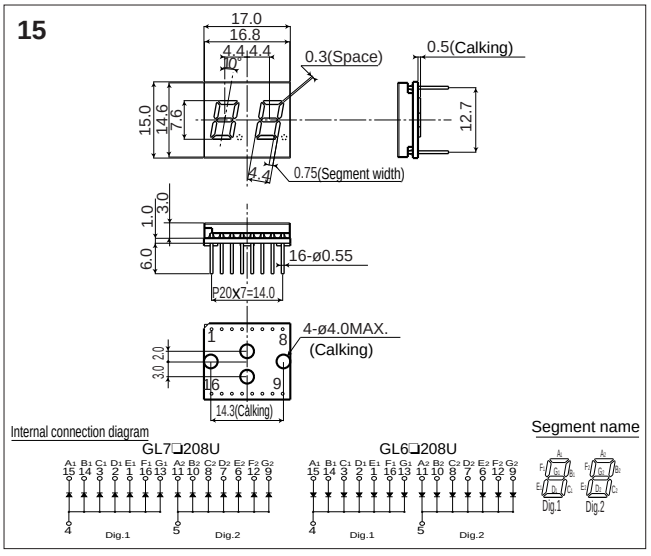

GL3❑202 Series GL3❑201 Series

**14**



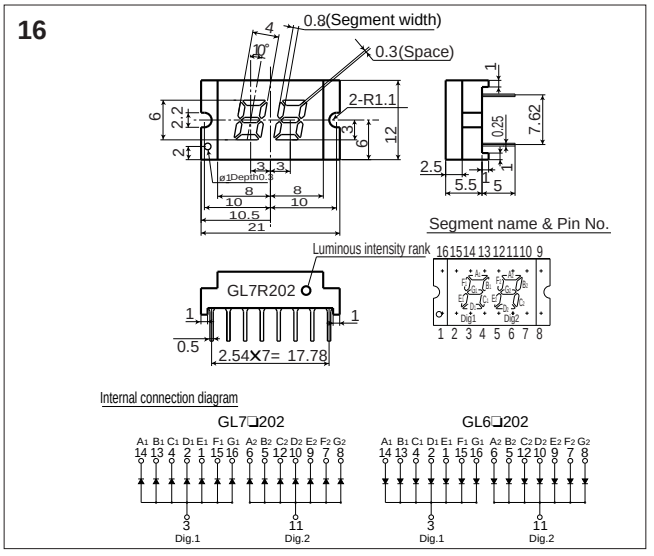

GL7❑206U Series GL6❑206U Series

**15**



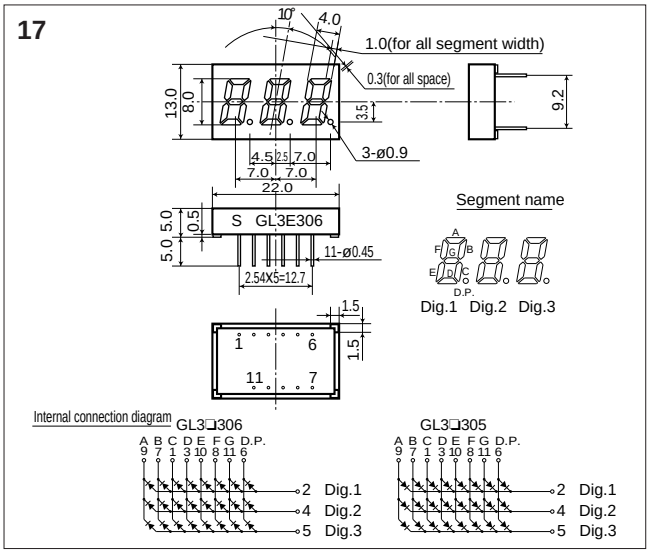

GL7❑208U Series GL6❑208U Series

**16**



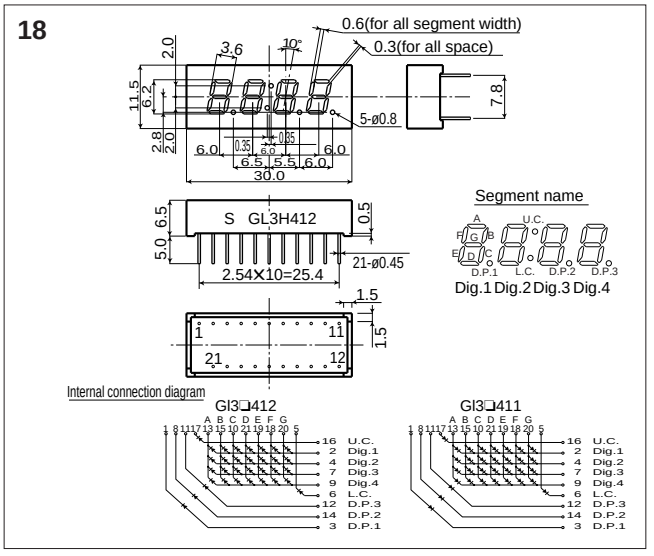

GL7❑202 Series GL6❑202 Series

**17**




GL3❑306 Series GL3❑305 Series

**18**



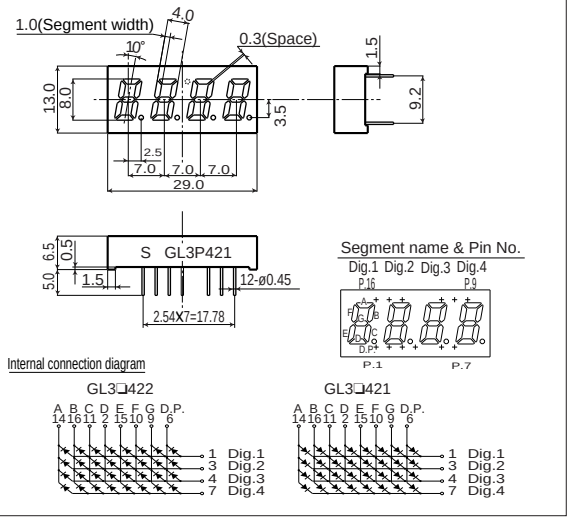

GL3❑412 Series GL3❑411 Series

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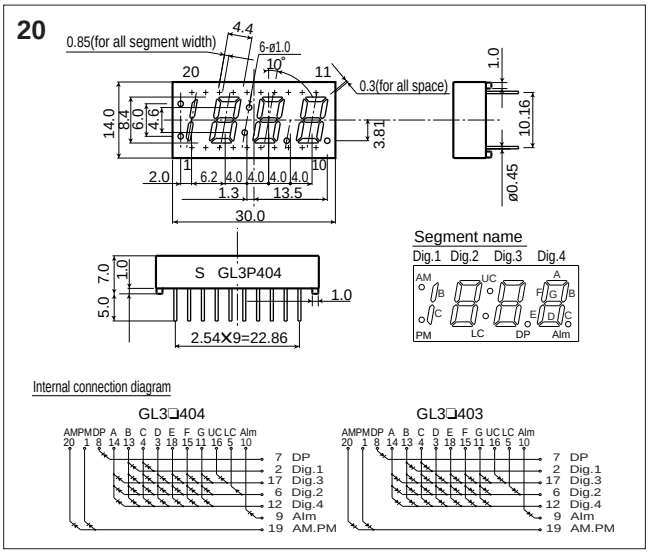
# Numeric LED Outline Dimensions(Unit:mm)

**19**



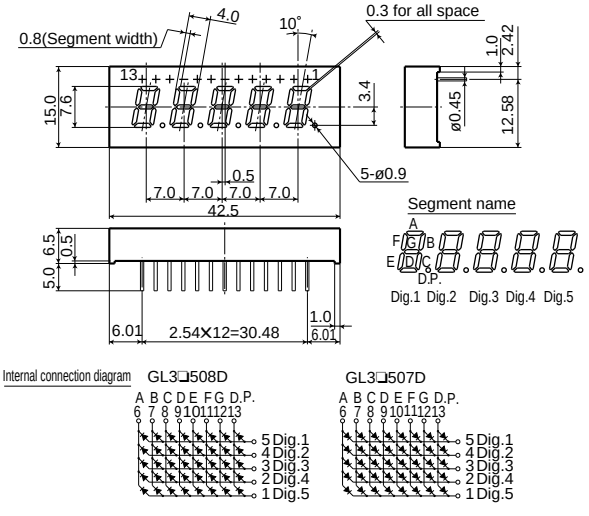

GL3❑422 Series GL3❑421 Series

**20**




GL3❑404 Series GL3❑403 Series

**21**




GL3❑508D Series GL3❑507D Series

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