

1

2

3

4

5

6

7

8

A

B

C

D

E

F

G

H

PACKAGE DIMENSION mm

DIG.1DIG.2DIG.3DIG.4

INTERNAL CIRCUIT DIAGRAM

Common Cathode

L-KLS9-D-2841 Ax

Common Anode

L-KLS9-D-2841 Bx

Color Code

Emitting Color

Peak Wavelength nm

Forward Voltage V<sub>F</sub>/Seg. Typ. Max.

Luminous Intensity I<sub>v</sub>/Seg. Min. Typ.

|     |            |     |      |     |     |     |
|-----|------------|-----|------|-----|-----|-----|
| UHR | Ultra Red  | 640 | 2    | 2.5 | 40  | 60  |
| UE  | Orange     | 615 | 2    | 2.5 | 40  | 60  |
| H   | Red        | 623 | 2.25 | 2.5 | 0.4 | 0.8 |
| YO  | Amber      | 605 | 2    | 2.5 | 40  | 60  |
| UY  | Yellow     | 590 | 2    | 2.5 | 40  | 60  |
| UG  | Green      | 568 | 2.1  | 2.5 | 25  | 40  |
| PG  | Pure Green | 525 | 3.3  | 3.8 | 150 | 200 |
| UB  | Blue       | 465 | 3.3  | 3.8 | 40  | 100 |
| UW  | White      |     | 3.3  | 3.8 | 200 | 500 |

Electro/Optical Characteristics I<sub>F</sub>=20mA Ta=25°C

Order information

L-KLS9-D-28 4 1 A XX -X X

RoHS

Digit Mode

Character Height

Digit Number:

1-single digit

2-Dual digit

3-Three digit

4-Four digit

Reflector surface color

Color Code:

Drive Mode:

Common Cathode

Common Anode

Model Number:

Maximum Ratings Ta=25°C (Derate above 25°C)

| Characteristic                 | Test Condition                       | Symbol          | Units | Ultra Red | Orange | Red  | Amber | Yellow | Green | Pure Green | Blue  | White |
|--------------------------------|--------------------------------------|-----------------|-------|-----------|--------|------|-------|--------|-------|------------|-------|-------|
| Pulse Forward Current Per Seg. | 1/10 duty cycle<br>0.1ms Pulse width | I <sub>FP</sub> | mA    | 100       | 100    | 50   | 100   | 100    | 100   | 100        | 100   | 100   |
| DC Forward Current Per Seg.    |                                      | I <sub>F</sub>  | mA    | 30        | 30     | 15   | 30    | 30     | 30    | 30         | 30    | 30    |
| Reverse Current Per Seg.       | V <sub>R</sub> =5V                   | I <sub>R</sub>  | A     | 10        | 10     | 10   | 10    | 10     | 10    | 10         | 10    | 10    |
| Power Dissipation              |                                      | P <sub>D</sub>  | mW    | 65×8      | 65×8   | 40×8 | 65×8  | 65×8   | 75×8  | 110×8      | 120×8 | 120×8 |

Tolerance: ±0.25mm unless stated

PROJECTION

UNITS mm

SHEET SIZE A4

Draw data 2018-1-25

Check data 2018-1-25

Description: 0.28" Single Digit 7 Segment DISPLAYS

KLS P/N: L-KLS9-D-2841XXXXX

KLS NingBo KLS ELECTRONIC CO.,L TD.

1

2

3

4

5

6

7

8

A

B

C

D

E

F

G

H

PACKAGE DIMENSION mm

DIG.1

DIG.2

DIG.3

DIG.4

INTERNAL CIRCUIT DIAGRAM

Common Cathode

L-KLS9-D-2841Cx

Common Anode

L-KLS9-D-2841Dx

Color Code

Emitting Color

Peak Wavelength nm

Forward Voltage V<sub>F</sub>/Seg. Typ. Max.

Luminous Intensity I<sub>v</sub>/Seg. Min. Typ.

|     |            |     |      |     |     |     |
|-----|------------|-----|------|-----|-----|-----|
| UHR | Ultra Red  | 640 | 2    | 2.5 | 40  | 60  |
| UE  | Orange     | 615 | 2    | 2.5 | 40  | 60  |
| H   | Red        | 623 | 2.25 | 2.5 | 0.4 | 0.8 |
| YO  | Amber      | 605 | 2    | 2.5 | 40  | 60  |
| UY  | Yellow     | 590 | 2    | 2.5 | 40  | 60  |
| UG  | Green      | 568 | 2.1  | 2.5 | 25  | 40  |
| PG  | Pure Green | 525 | 3.3  | 3.8 | 150 | 200 |
| UB  | Blue       | 465 | 3.3  | 3.8 | 40  | 100 |
| UW  | White      |     | 3.3  | 3.8 | 200 | 500 |

Electro/Optical Characteristics I<sub>F</sub>=20mA Ta=25°C

RoHS

Digit Mode

Character Height

Digit Number:

1-single digit

2-Dual digit

3-Three digit

4-Four digit

L-KLS9-D-28

4

1

C

XX

-X

X

Reflector surface color

Color Code:

Drive Mode:

Common Cathode

Common Anode

Model Number:

Maximum Ratings Ta=25°C (Derate above 25°C)

| Characteristic                 | Test Condition                       | Symbol          | Units | Ultra Red | Orange | Red  | Amber | Yellow | Green | Pure Green | Blue  | White |
|--------------------------------|--------------------------------------|-----------------|-------|-----------|--------|------|-------|--------|-------|------------|-------|-------|
| Pulse Forward Current Per Seg. | 1/10 duty cycle<br>0.1ms Pulse width | I <sub>FP</sub> | mA    | 100       | 100    | 50   | 100   | 100    | 100   | 100        | 100   | 100   |
| DC Forward Current Per Seg.    |                                      | I <sub>F</sub>  | mA    | 30        | 30     | 15   | 30    | 30     | 30    | 30         | 30    | 30    |
| Reverse Current Per Seg.       | V <sub>R</sub> =5V                   | I <sub>R</sub>  | A     | 10        | 10     | 10   | 10    | 10     | 10    | 10         | 10    | 10    |
| Power Dissipation              |                                      | P <sub>D</sub>  | mW    | 65×8      | 65×8   | 40×8 | 65×8  | 65×8   | 75×8  | 110×8      | 120×8 | 120×8 |

Tolerance: ±0.25mm unless stated

PROJECTION

UNITS mm

SHEET SIZE A4

Draw data 2018-1-25

Check data 2018-1-25

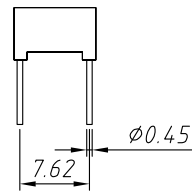
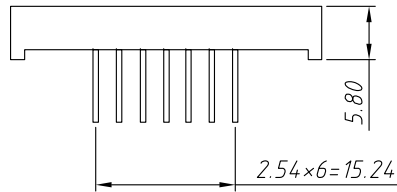
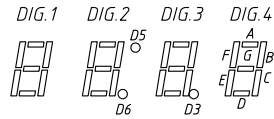
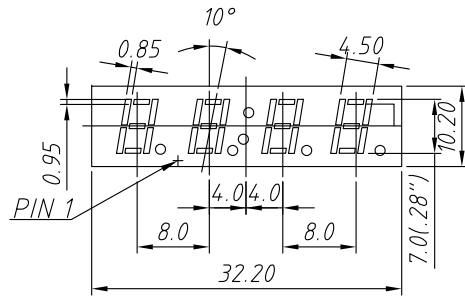
Description: 0.28" Single Digit 7 Segment DISPLAYS

KLS P/N: L-KLS9-D-2841XXXXX

KLS

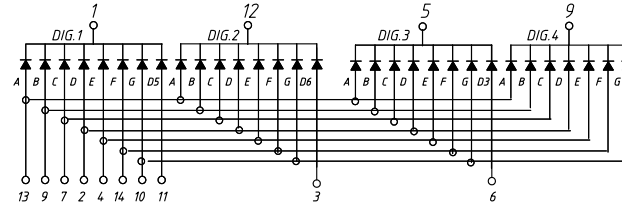
NingBo KLS ELECTRONIC CO.,L TD.

# PACKAGE DIMENSION mm

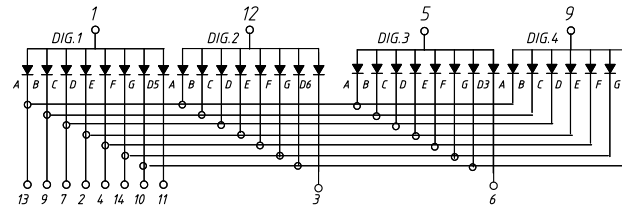


# INTERNAL CIRCUIT DIAGRAM

Common Cathode  
L-KLS9-D-2841 Ex



Common Anode  
L-KLS9-D-2841 Fx

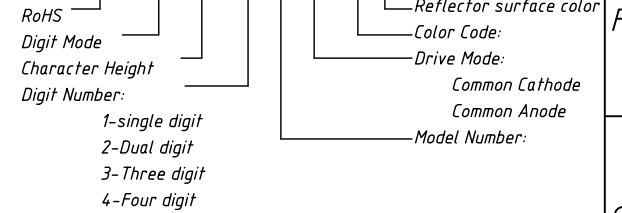


| Color Code | Emitting Color | Peak Wavelength<br>nm | Forward Voltage<br>V <sub>F</sub> /Seg. |      | Luminous Intensity I <sub>v</sub> /Seg. |      |
|------------|----------------|-----------------------|-----------------------------------------|------|-----------------------------------------|------|
|            |                |                       | Typ.                                    | Max. | Min.                                    | Typ. |
|            |                | nm                    | V                                       |      | mcd                                     |      |
| UHR        | Ultra Red      | 640                   | 2                                       | 2.5  | 40                                      | 60   |
| UE         | Orange         | 615                   | 2                                       | 2.5  | 40                                      | 60   |
| H          | Red            | 623                   | 2.25                                    | 2.5  | 0.4                                     | 0.8  |
| YO         | Amber          | 605                   | 2                                       | 2.5  | 40                                      | 60   |
| UY         | Yellow         | 590                   | 2                                       | 2.5  | 40                                      | 60   |
| UG         | Green          | 568                   | 2.1                                     | 2.5  | 25                                      | 40   |
| PG         | Pure Green     | 525                   | 3.3                                     | 3.8  | 150                                     | 200  |
| UB         | Blue           | 465                   | 3.3                                     | 3.8  | 40                                      | 100  |
| UW         | White          |                       | 3.3                                     | 3.8  | 200                                     | 500  |

Electro/Optical Characteristics I<sub>F</sub>=20mA Ta=25°C

# Order information

L-KLS9-D-28 4 1 E XX -X X



# Maximum Ratings Ta=25°C (Derate above 25°C)

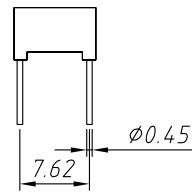
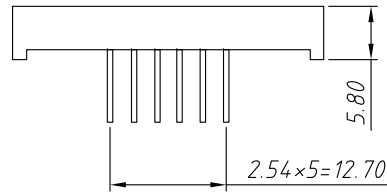
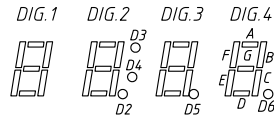
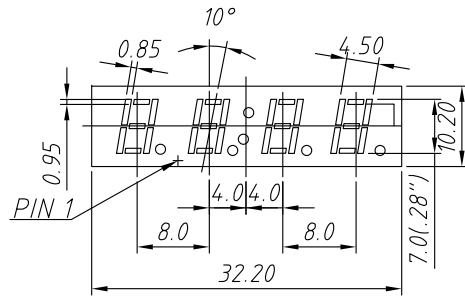
| Characteristic                 | Test Condition                       | Symbol          | Units | Ultra Red | Orange | Red  | Amber | Yellow | Green | Pure Green | Blue  | White |
|--------------------------------|--------------------------------------|-----------------|-------|-----------|--------|------|-------|--------|-------|------------|-------|-------|
|                                |                                      |                 |       | UHR       | UE     | H    | YO    | UY     | UG    | PG         | UB    | UW    |
| Pulse Forward Current Per Seg. | 1/10 duty cycle<br>0.1ms Pulse width | I <sub>FP</sub> | mA    | 100       | 100    | 50   | 100   | 100    | 100   | 100        | 100   | 100   |
| DC Forward Current Per Seg.    |                                      | I <sub>F</sub>  | mA    | 30        | 30     | 15   | 30    | 30     | 30    | 30         | 30    | 30    |
| Reverse Current Per Seg.       | V <sub>R</sub> =5V                   | I <sub>R</sub>  | A     | 10        | 10     | 10   | 10    | 10     | 10    | 10         | 10    | 10    |
| Power Dissipation              |                                      | P <sub>D</sub>  | mW    | 65×8      | 65×8   | 40×8 | 65×8  | 65×8   | 75×8  | 110×8      | 120×8 | 120×8 |

|            |                          |              |                                          |
|------------|--------------------------|--------------|------------------------------------------|
| Tolerance: | ±0.25mm<br>unless stated | Description: | 0.28" Single Digit<br>7 Segment DISPLAYS |
| PROJECTION |                          |              |                                          |
| UNITS      | mm                       | KLS P/N:     | L-KLS9-D-2841XXXXX                       |
| SHEET SIZE | A4                       |              |                                          |
| Draw data  | 2018-1-25                |              |                                          |
| Check data | 2018-1-25                |              |                                          |



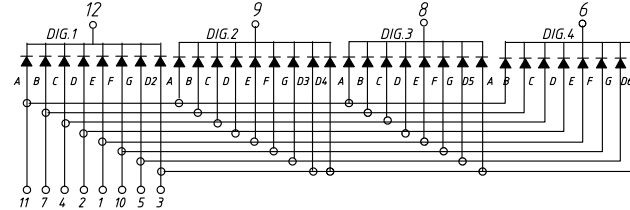
NingBo KLS ELECTRONIC CO.,L TD.

# PACKAGE DIMENSION mm

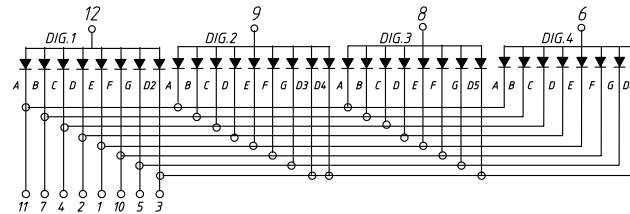


# INTERNAL CIRCUIT DIAGRAM

Common Cathode  
L-KLS9-D-2841 Gx



Common Anode  
L-KLS9-D-2841 Hx

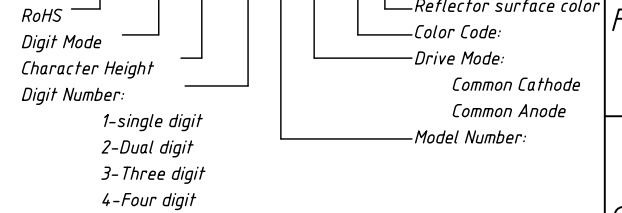


| Color Code | Emitting Color | Peak Wavelength<br>nm | Forward Voltage<br>V <sub>F</sub> /Seg. |      | Luminous Intensity I <sub>v</sub> /Seg. |      |
|------------|----------------|-----------------------|-----------------------------------------|------|-----------------------------------------|------|
|            |                |                       | Typ.                                    | Max. | Min.                                    | Typ. |
|            |                | nm                    | V                                       |      | mcd                                     |      |
| UHR        | Ultra Red      | 640                   | 2                                       | 2.5  | 40                                      | 60   |
| UE         | Orange         | 615                   | 2                                       | 2.5  | 40                                      | 60   |
| H          | Red            | 623                   | 2.25                                    | 2.5  | 0.4                                     | 0.8  |
| YO         | Amber          | 605                   | 2                                       | 2.5  | 40                                      | 60   |
| UY         | Yellow         | 590                   | 2                                       | 2.5  | 40                                      | 60   |
| UG         | Green          | 568                   | 2.1                                     | 2.5  | 25                                      | 40   |
| PG         | Pure Green     | 525                   | 3.3                                     | 3.8  | 150                                     | 200  |
| UB         | Blue           | 465                   | 3.3                                     | 3.8  | 40                                      | 100  |
| UW         | White          |                       | 3.3                                     | 3.8  | 200                                     | 500  |

Electro/Optical Characteristics I<sub>F</sub>=20mA Ta=25°C

# Order information

L-KLS9-D-28 4 1 G XX -X X



# Maximum Ratings Ta=25°C (Derate above 25°C)

| Characteristic                 | Test Condition                       | Symbol          | Units | Ultra Red | Orange | Red  | Amber | Yellow | Green | Pure Green | Blue  | White |
|--------------------------------|--------------------------------------|-----------------|-------|-----------|--------|------|-------|--------|-------|------------|-------|-------|
|                                |                                      |                 |       | UHR       | UE     | H    | YO    | UY     | UG    | PG         | UB    | UW    |
| Pulse Forward Current Per Seg. | 1/10 duty cycle<br>0.1ms Pulse width | I <sub>FP</sub> | mA    | 100       | 100    | 50   | 100   | 100    | 100   | 100        | 100   | 100   |
| DC Forward Current Per Seg.    |                                      | I <sub>F</sub>  | mA    | 30        | 30     | 15   | 30    | 30     | 30    | 30         | 30    | 30    |
| Reverse Current Per Seg.       | V <sub>R</sub> =5V                   | I <sub>R</sub>  | A     | 10        | 10     | 10   | 10    | 10     | 10    | 10         | 10    | 10    |
| Power Dissipation              |                                      | P <sub>D</sub>  | mW    | 65×8      | 65×8   | 40×8 | 65×8  | 65×8   | 75×8  | 110×8      | 120×8 | 120×8 |

|            |                          |              |                                          |
|------------|--------------------------|--------------|------------------------------------------|
| Tolerance: | ±0.25mm<br>unless stated | Description: | 0.28" Single Digit<br>7 Segment DISPLAYS |
| PROJECTION |                          |              |                                          |
| UNITS      | mm                       | KLS P/N:     | L-KLS9-D-2841XXXXX                       |
| SHEET SIZE | A4                       |              |                                          |
| Draw data  | 2018-1-25                |              |                                          |
| Check data | 2018-1-25                |              |                                          |



NingBo KLS ELECTRONIC CO.,L TD.