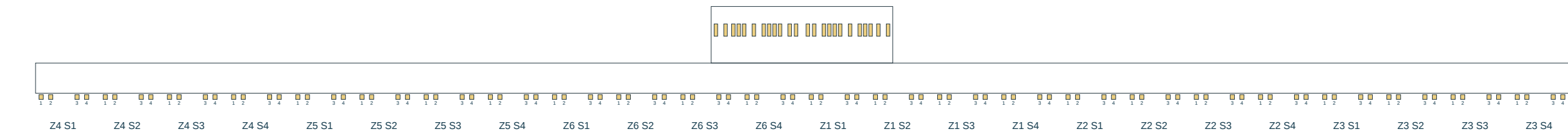


led-upper-v0.2 - full-size pad alignment template

A3 landscape - print ACTUAL SIZE / 100%, not Fit. Verify the 100 mm scale before use.

Developed length 324.969 mm; band 6.4 mm; nominal seam 1.6 mm.



EXACTLY 100 mm

Wrap around the ACTUAL mounted stack, with the LED faces outward. The lower pattern is already oriented correctly.

Flat order: Z4, Z5, Z6, Z1, Z2, Z3. Seam: Z3/Z4. Upper input tab: Z6/Z1, directed above the cylinder.

Compare all 96 pad centres with real strips. Pad labels are +24V / W / N / C from left to right in this outside view.

This is a pad-location template, not a routing outline: production files include individually slotted, rounded fingers.

Design basis: 101.6 mm cylinder, 1.1 mm VHB 4611 under the band, 0.15 mm flex, 0.7 mm strip incl. its adhesive.

Stop if the pads drift out of alignment; adjust the CAD mounting-radius parameter to the measured stack and recheck.

The 4611 thickness tolerance alone can cause 0.346 mm end drift. Nominal lateral copper margin is 0.30 mm per side.

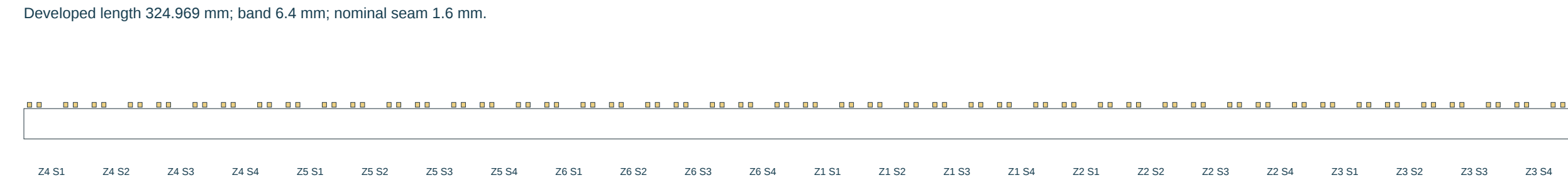
DO NOT order a fit-critical production run from a paper template that does not match the real assembly.

Joint: 0.9 x 1.0 mm plated flex land, 0.3 mm solder-through hole, 1.0 mm lap onto approximately 1.8 mm strip pad.

Use a supported solder sample first. Verify wetting on both lands and no bridges; inspect before mounting on metal.

led-lower-v0.2 - full-size pad alignment template

A3 landscape - print ACTUAL SIZE / 100%, not Fit. Verify the 100 mm scale before use.



Wrap around the ACTUAL mounted stack, with the LED faces outward. The lower pattern is already oriented correctly.

Flat order: Z4, Z5, Z6, Z1, Z2, Z3. Seam: Z3/Z4. Upper input tab: Z6/Z1, directed above the cylinder.

Compare all 96 pad centres with real strips. Pad labels are +24V / W / N / C from left to right in this outside view.

This is a pad-location template, not a routing outline: production files include individually slotted, rounded fingers.

Design basis: 101.6 mm cylinder, 1.1 mm VHB 4611 under the band, 0.15 mm flex, 0.7 mm strip incl. its adhesive.

Stop if the pads drift out of alignment; adjust the CAD mounting-radius parameter to the measured stack and recheck.

The 4611 thickness tolerance alone can cause 0.346 mm end drift. Nominal lateral copper margin is 0.30 mm per side.

DO NOT order a fit-critical production run from a paper template that does not match the real assembly.

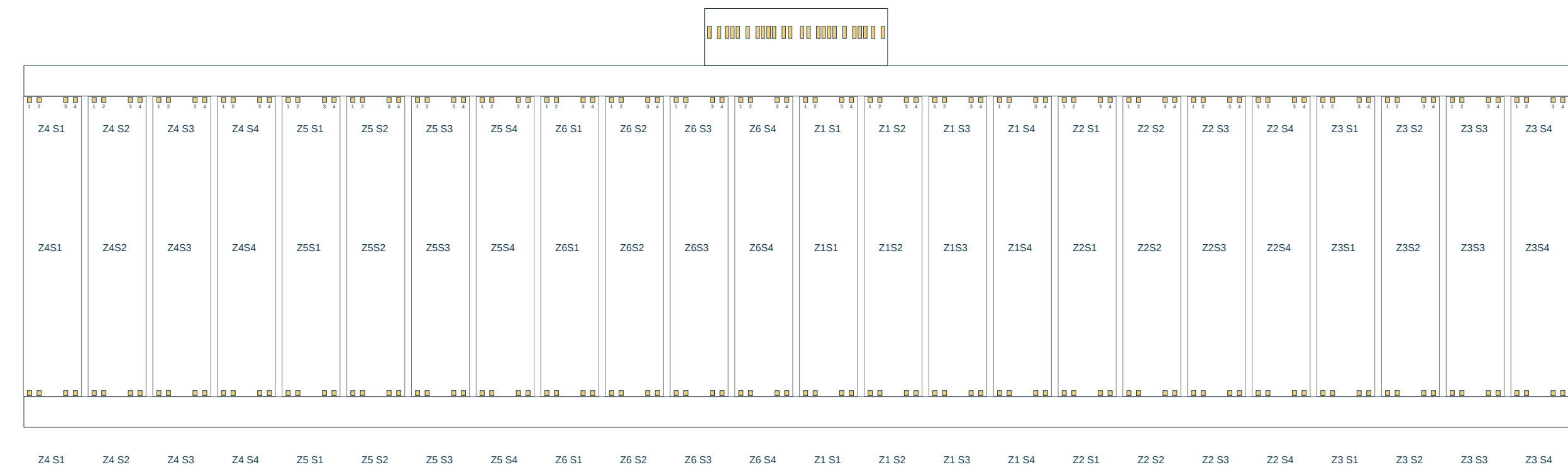
Joint: 0.9 x 1.0 mm plated flex land, 0.3 mm solder-through hole, 1.0 mm lap onto approximately 1.8 mm strip pad.

Use a supported solder sample first. Verify wetting on both lands and no bridges; inspect before mounting on metal.

Installed cylinder placement - developed outside view

A3 landscape - print ACTUAL SIZE / 100%, not Fit. Verify the 100 mm scale before use.

Developed length 324.969 mm; band 6.4 mm; nominal seam 1.6 mm.



EXACTLY 100 mm

Cylinder height 76.2 mm. Strip length 63 mm; centred: 6.6 mm axial margins. Bodies retain their original adhesive.

Upper band begins 0.1 mm below top rim; lower band ends 0.1 mm above bottom rim. Fingers overlap strip ends.

Only band backs use the new foam tape. Keep tape off the fingers, solder holes and LED strip body.

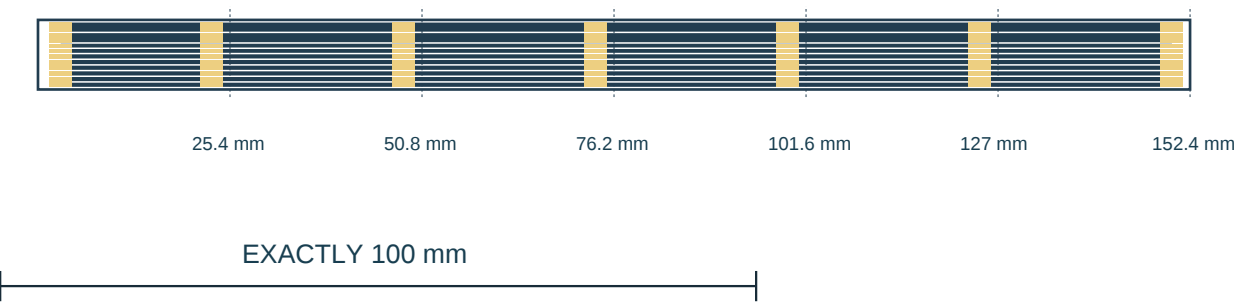
Radial section: aluminum -> 1.1 mm band tape -> 0.15 mm flex. Adjacent strip pad top is nominally 1.1 mm.

Leave the final 0.7 mm of band width unbonded near fingers; ease the small height transition without a crease.

Upper tab uses six wire groups to main J2-J7; strain-relieve wires to the enclosure. No fixed tail-length assumption.

Gimbal ribbon - actual size and termination legend

A3 landscape - print ACTUAL SIZE / 100%, not Fit. Verify the 100 mm scale before use.



Pin 1: V24_MOTOR2	Pin 6: SPOT1_LED_MINUS
Pin 2: GND	Pin 7: SPOT2_LED_PLUS
Pin 3: CAN_H	Pin 8: SPOT2_LED_MINUS
Pin 4: CAN_L	Pin 9: SPOT3_LED_PLUS
Pin 5: SPOT1_LED_PLUS	Pin 10: SPOT3_LED_MINUS

Pin 1 = lane nearest the upper long edge in this drawing. Same pin order at all seven banks; keep J1 (left).

Optional finished lengths: 25.4 / 50.8 / 76.2 / 101.6 / 127.0 mm, or full 152.4 mm.

0.20 mm PI stiffener + bond adhesive on back at each bank: x = bank centre +/-2 mm, full 9.2 mm width.

Cuts are outside those stiffeners. Inspect the exposed copper cross-section for burrs/shorts, then insulate the end.

Bond only to the stationary arm. Use ordinary wires/service loops at moving joints and at motor/spotlight branches.

Source: main J13 (four motor nets) and J9/J10/J11 (six separate LED conductors). LED minus is NOT ground.

Motor connector cavity order and duplicated power contacts must be checked on the actual motor before termination.