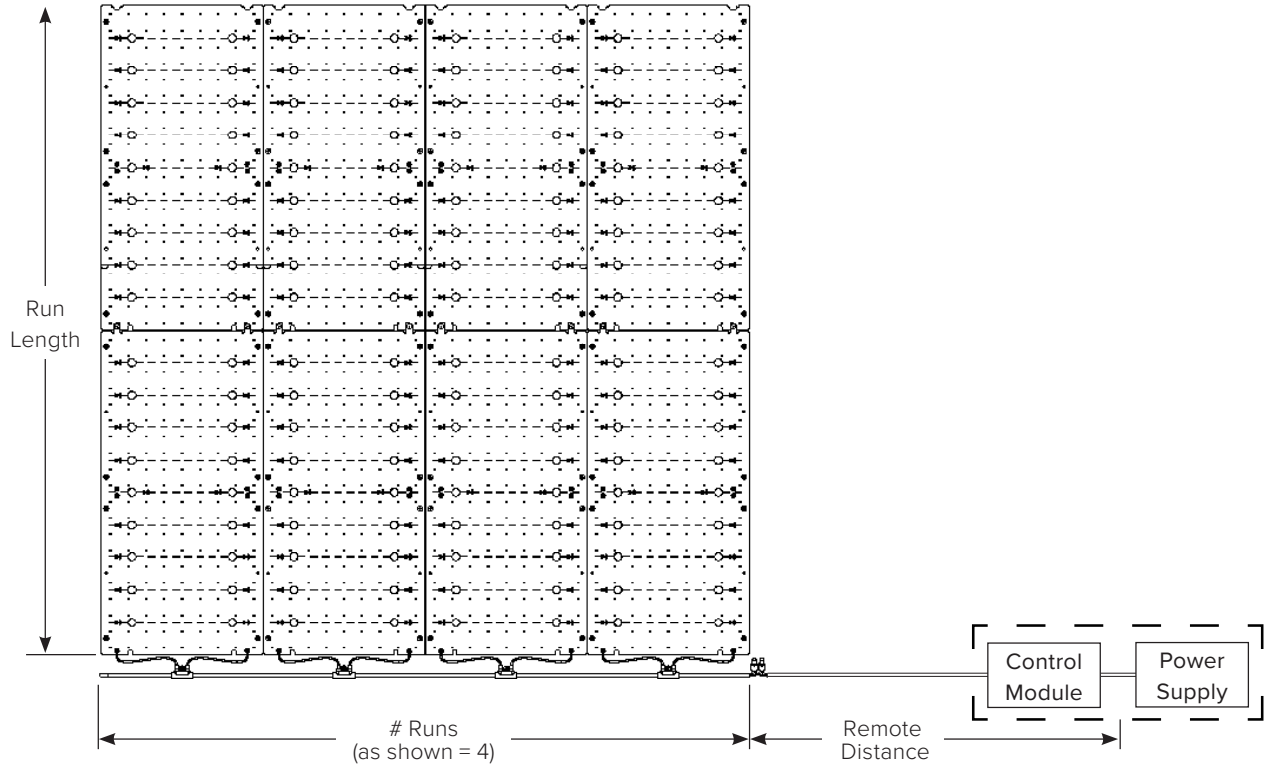


COOLEGE™

EXAMPLE LAYOUT WITH DEFINITIONS



1.1 CALCULATING MAXIMUM RUN LENGTH

Use the following table to determine the maximum run length possible based on the number of runs, the light output of the TILES, and the CCT for one (1) 90W channel. The values shown correspond to the nearest cut increment of the TILE.

MAXIMUM RUN LENGTH - VALUES IN FEET												
# of Runs	900lm						600lm					
	2200K	2700K	3000K	3500K	4000K	5700K	2200K	2700K	3000K	3500K	4000K	5700K
1	N/A	13.00	14.20	14.60	14.60	14.60	18.30	19.10	19.70	20.10	20.10	20.10
2		5.80	6.40	6.60	6.60	6.60	8.10	8.90	9.40	9.60	9.60	9.60
3		3.90	4.30	4.30	4.30	4.30	5.50	5.80	6.20	6.40	6.40	6.40
4		2.80	3.20	3.20	3.20	3.20	4.10	4.40	4.60	4.80	4.80	4.80
5		2.30	2.50	2.50	2.50	2.50	3.20	3.50	3.70	3.70	3.70	3.70
6		1.90	2.10	2.10	2.10	2.10	2.70	2.80	3.00	3.20	3.20	3.20
7		1.60	1.80	1.80	1.80	1.80	2.30	2.50	2.70	2.70	2.70	2.70
8		1.40	1.60	1.60	1.60	1.60	1.90	2.10	2.30	2.30	2.30	2.30

# of Runs	300lm						150lm					
	2200K	2700K	3000K	3500K	4000K	5700K	2200K	2700K	3000K	3500K	4000K	5700K
1	26.60	28.00	28.70	29.50	29.50	29.70	37.00	39.00	40.90	41.70	41.70	42.30
2	16.50	20.10	21.30	22.00	22.00	22.40	34.80	36.60	37.40	38.20	38.20	38.80
3	11.00	12.00	12.80	13.30	13.30	13.50	21.80	26.60	28.00	28.70	28.70	29.50
4	8.10	9.00	9.60	9.90	9.90	10.10	16.30	17.90	18.80	19.30	19.30	19.80
5	6.60	7.30	7.60	8.00	8.00	8.00	13.10	14.40	15.10	15.40	15.40	15.90
6	5.50	6.00	6.40	6.60	6.60	6.70	10.80	11.90	12.60	12.90	12.90	13.30
7	4.60	5.10	5.30	5.70	5.70	5.70	9.20	10.30	10.80	11.00	11.00	11.30
8	4.10	4.40	4.80	5.00	5.00	5.00	8.10	8.90	9.40	9.60	9.60	9.90

Example 1: 3000K; 600lm/sqft; 4 Runs (as shown in the diagram above)

- Using the table, the corresponding value for this configuration is 4.6ft. This means that more than two full regular TILES may be used without being cut for each of the 4 runs.

Example 2: 2700K; 150 lm/sqft; 4 Runs

- Using the table, the corresponding value for this configuration is 17.9ft. This means that approximately 8.5 regular TILES may be used.

MAXIMUM RUN LENGTH - VALUES IN M

# of Runs	900lm (9680lm/m ²)						600lm (6450lm/m ²)					
	2200K	2700K	3000K	3500K	4000K	5700K	2200K	2700K	3000K	3500K	4000K	5700K
1	N/A	3.96	4.32	4.44	4.44	4.44	5.58	5.82	6.00	6.12	6.12	6.12
2		1.78	1.94	2.00	2.00	2.00	2.48	2.70	2.86	2.92	2.92	2.92
3		1.19	1.30	1.30	1.30	1.30	1.67	1.78	1.89	1.94	1.94	1.94
4		0.86	0.97	0.97	0.97	0.97	1.24	1.35	1.40	1.46	1.46	1.46
5		0.70	0.76	0.76	0.76	0.76	0.97	1.08	1.13	1.13	1.13	1.13
6		0.59	0.65	0.65	0.65	0.65	0.81	0.86	0.92	0.97	0.97	0.97
7		0.49	0.54	0.54	0.54	0.54	0.70	0.76	0.81	0.81	0.81	0.81
8		0.43	0.49	0.49	0.49	0.49	0.59	0.65	0.70	0.70	0.70	0.70

# of Runs	300lm (3230lm/m ²)						150lm (1610lm/m ²)					
	2200K	2700K	3000K	3500K	4000K	5700K	2200K	2700K	3000K	3500K	4000K	5700K
1	8.10	8.52	8.76	9.00	9.00	9.06	11.28	11.88	12.48	12.72	12.72	12.90
2	5.02	6.12	6.48	6.72	6.72	6.84	10.62	11.16	11.40	11.64	11.64	11.82
3	3.35	3.67	3.89	4.05	4.05	4.10	6.64	8.10	8.52	8.76	8.76	9.00
4	2.48	2.75	2.92	3.02	3.02	3.08	4.97	5.45	5.72	5.89	5.89	6.05
5	2.00	2.21	2.32	2.43	2.43	2.43	4.00	4.37	4.59	4.70	4.70	4.86
6	1.67	1.84	1.94	2.00	2.00	2.05	3.29	3.62	3.83	3.94	3.94	4.05
7	1.40	1.57	1.62	1.73	1.73	1.73	2.81	3.13	3.29	3.35	3.35	3.46
8	1.24	1.35	1.46	1.51	1.51	1.51	2.48	2.70	2.86	2.92	2.92	3.02

Example 1: 3000K; 6450lm/m²; 4 Runs (as shown in the diagram above)

- Using the table, the corresponding value for this configuration is 1.40m. This means that approximately 2.5 full regular TILES may be used without being cut for each of the 4 runs.

Example 2: 2700K; 1600lm/m²; 4 Runs

- Using the table, the corresponding value for this configuration is 5.45m. This means that approximately 8.5 regular TILES may be used.

CALCULATING REMOTE POWER & CONTROL DISTANCE

Due to a voltage drop caused by the resistance of the cable carrying power between the Power Supply/Control Module and the TILES, there is a maximum distance from the TILES at which the power and control units may be mounted.

The maximum distance is dependent upon the size of the conductors used and the total load (# of TILES x power per TILE as determined by lumen rating)

Use the tables below to determine the size of the conductors required to achieve the maximum “remote distance” – the distance between the Control Module and TILES if the Control Module is located near the power supply OR the total distance between the Power Supply and TILES if the Control Module is located near the TILES.

MAXIMUM REMOTE DISTANCE - TILE 150LM (VALUES IN FT)

Conductor Size (AWG)	Configuration (# Runs x Maximum Length per Run)							
	1 x max length (ft)	2 x max length (ft)	3 x max length (ft)	4 x max length (ft)	5 x max length (ft)	6 x max length (ft)	7 x max length (ft)	8 x max length (ft)
16	15.5	16.5	38	51	56	58.5	58.5	58.5
14	25	27	60.5	81.5	89.5	93.5	93.5	93.5
12	40	42.5	96	130	142.5	148.5	148.5	148.5
10*	64	68	153	206.5	226.5	236	236	236

MAXIMUM REMOTE DISTANCE - TILE 300LM (VALUES IN FT)

Conductor Size (AWG)	Configuration (# Runs x Maximum Length per Run)				
	1 x max length (ft)	2 x max length (ft)	3 x max length (ft)	4 x max length (ft)	5 x max length (ft)
16	14	35	54.5	60.5	63
14	22.5	55.5	87	96.5	100.5
12	36.5	88.5	139	153.5	160
10*	58	141	221	244.5	254

MAXIMUM REMOTE DISTANCE - TILE 600LM (VALUES IN FT)

Conductor Size (AWG)	Configuration (# Runs x Maximum Length per Run)			
	1 x max length (ft)	2 x max length (ft)	3 x max length (ft)	4 x max length (ft)
16	14	57	66.5	69
14	22.5	91	105.5	109.5
12	35.5	144.5	168	174.5
10*	57	230	267.5	277.5

MAXIMUM REMOTE DISTANCE - TILE 900LM (VALUES IN FT)

Conductor Size (AWG)	Configuration (# Runs x Maximum Length per Run)			
	1 x max length (ft)	2 x max length (ft)	3 x max length (ft)	4 x max length (ft)
16	28	62	69	69.5
14	44.5	98.5	109.5	110.5
12	71	156.5	174.5	176
10*	113	249	277.5	279.5

*The control module accepts wire gauges in the range of 12-26AWG. The 10AWG numbers in the chart are based on connecting on short length of 12AWG wire to the control module and then splicing on a subsequent length of 10AWG wire to supply the TILES.

Example

- Required “remote distance” = 50ft
- TILE Light Output = 600lm/sqft
- # Runs = 3 (assumes maximum run length)

Therefore, conductor size required = 14AWG (or larger)

MAXIMUM REMOTE DISTANCE - TILE 150LM (VALUES IN M)

Conductor Size (mm ²)	Configuration (# Runs x Maximum Length per Run)							
	1 x max length (m)	2 x max length (m)	3 x max length (m)	4 x max length (m)	5 x max length (m)	6 x max length (m)	7 x max length (m)	8 x max length (m)
1.3	4.7	5	11.6	15.5	17.1	17.8	17.8	17.8
2.1	7.6	8.2	18.4	24.8	27.3	28.5	28.5	28.5
3.3	12.2	13	29.3	39.6	43.4	45.3	45.3	45.3
5.3	19.5	20.7	46.6	62.9	69	71.9	71.9	71.9

MAXIMUM REMOTE DISTANCE - TILE 300LM (VALUES IN M)

Conductor Size (mm ²)	Configuration (# Runs x Maximum Length per Run)				
	1 x max length (m)	2 x max length (m)	3 x max length (m)	4 x max length (m)	5 x max length (m)
1.3	4.3	10.7	16.6	18.4	19.2
2.1	6.9	16.9	26.5	29.4	30.6
3.3	11.1	27	42.4	46.8	48.8
5.3	17.7	43	67.4	74.5	77.4

MAXIMUM REMOTE DISTANCE - TILE 600LM (VALUES IN M)

Conductor Size (mm ²)	Configuration (# Runs x Maximum Length per Run)			
	1 x max length (m)	2 x max length (m)	3 x max length (m)	4 x max length (m)
1.3	4.3	17.4	20.3	21
2.1	6.9	27.7	32.2	33.4
3.3	10.8	44	51.2	53.2
5.3	17.4	70.1	81.5	84.6

MAXIMUM REMOTE DISTANCE - TILE 900LM (VALUES IN M)

Conductor Size (mm ²)	Configuration (# Runs x Maximum Length per Run)			
	1 x max length (m)	2 x max length (m)	3 x max length (m)	4 x max length (m)
1.3	8.5	18.9	21	21.2
2.1	13.6	30	33.4	33.7
3.3	21.6	47.7	53.2	53.6
5.3	34.4	75.9	84.6	85.2

*The control module accepts wire sizes in the range of 0.13mm² to 3.3mm². The 5.3mm² numbers in the chart are based on connecting on short length of 3.3mm² wire to the control module and then splicing on a subsequent length of 5.3mm² wire to supply the TILES.

Example

- Required "remote distance" = 15m
- TILE Light Output = 6450lm/m²
- # Runs = 3 (assumes maximum run length)

Therefore, conductor size required = 3.3mm² (or larger)



RoHS



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Parts and workmanship