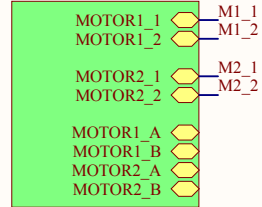
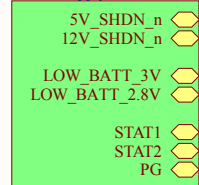
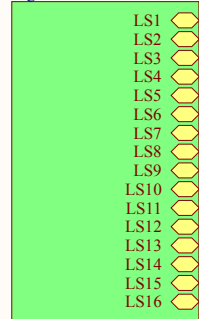
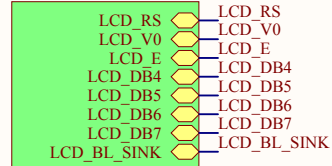


1

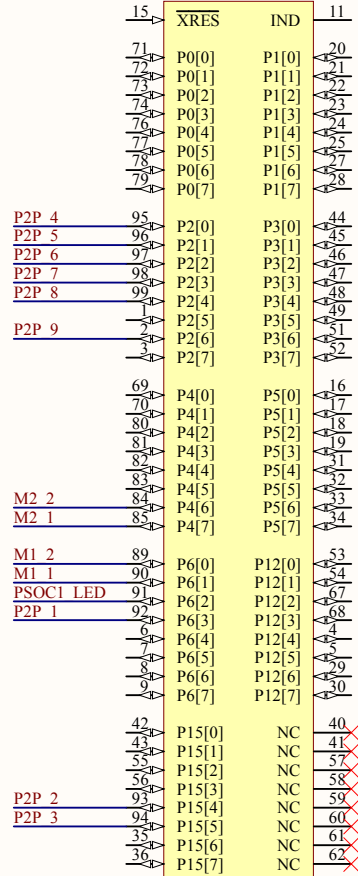
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3

4

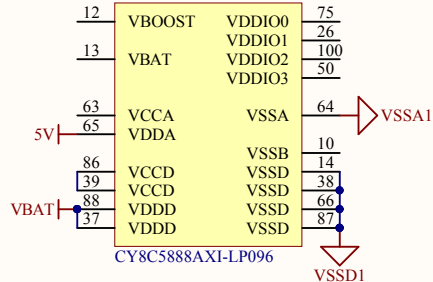
SS7
DC Motors.SchDocSS6
Power Supply.SchDocSS8
Light Sensors.SchDocSS9
LCD.SchDoc

U1A



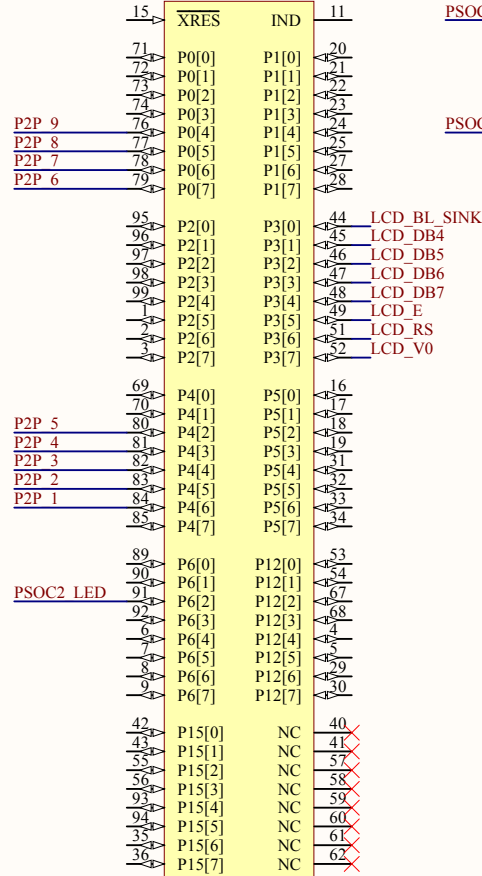
CY8C5888AXI-LP096

U1B



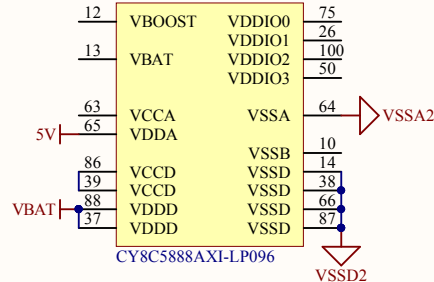
CY8C5888AXI-LP096

U2A



CY8C5888AXI-LP096

U2B

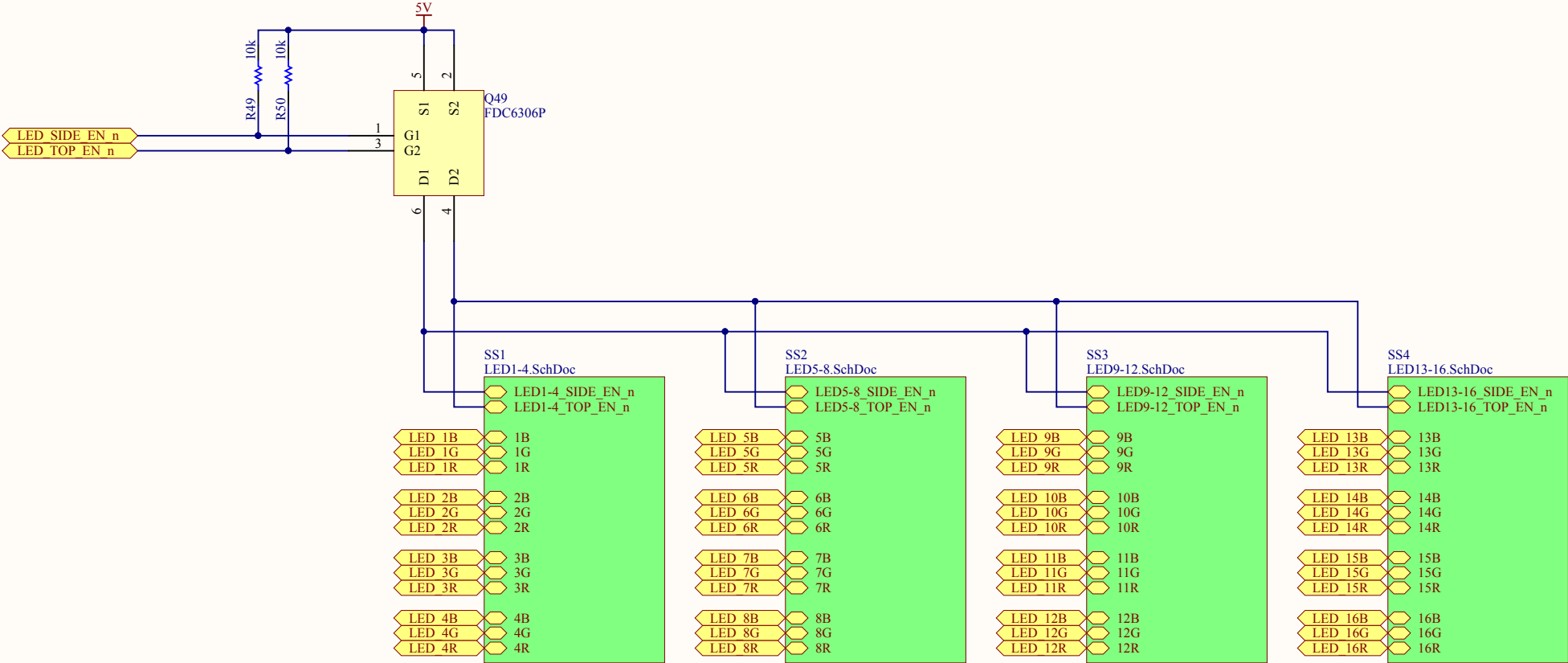


▲ All LEDs have been set to 20mA forward current for 5V via:
RED: R=150R
GREEN: R=91R
BLUE: R=91R

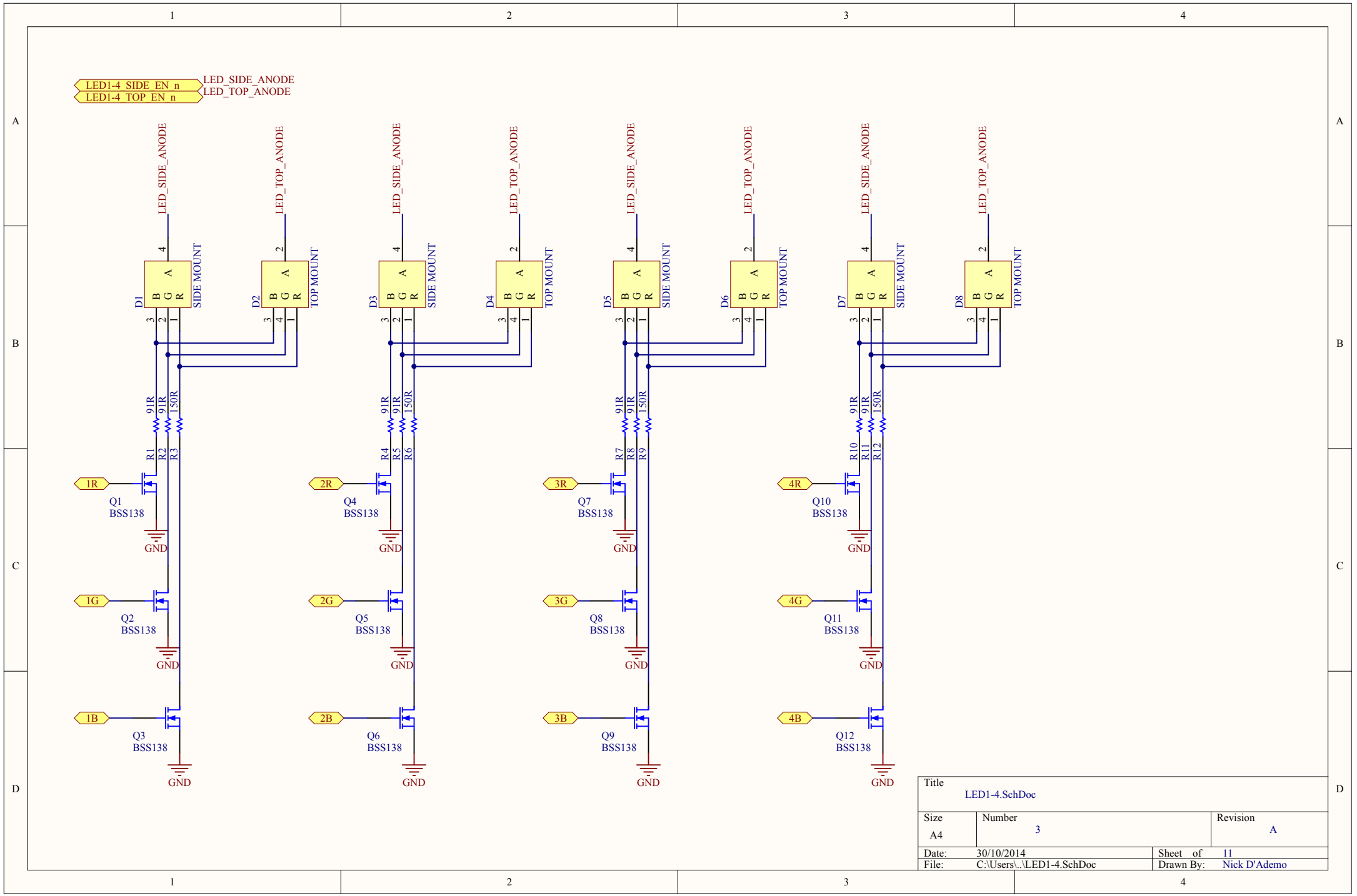
▲ SIDE LED:
Vf @ If=20mA (Min->Typ->Max):
RED: 1.8->2.0->2.4V
GREEN: 3.0->3.3->3.6V
BLUE: 3.0->3.3->3.6V

▲ TOP LED:
Vf @ If=20mA (Avg->Max):
RED: 2.0->2.6V
GREEN: 3.2->4.0V
BLUE: 3.2->4.0V

CLV1A-FKB-CJ1M1F1BB7R4S3: 675med Red, 1055med Green, 337med Blue
CLV1A-FKB-CK1N1G1BB7R4S3: 730med Red, 1150med Green, 365med Blue



Title			
Size	Number	Revision	
A4	2	A	
Date:	2024/04/10	Sheet of	11
File:	C:\Users\...\LEDs.SchDoc	Drawn By:	Nick D'Ademo



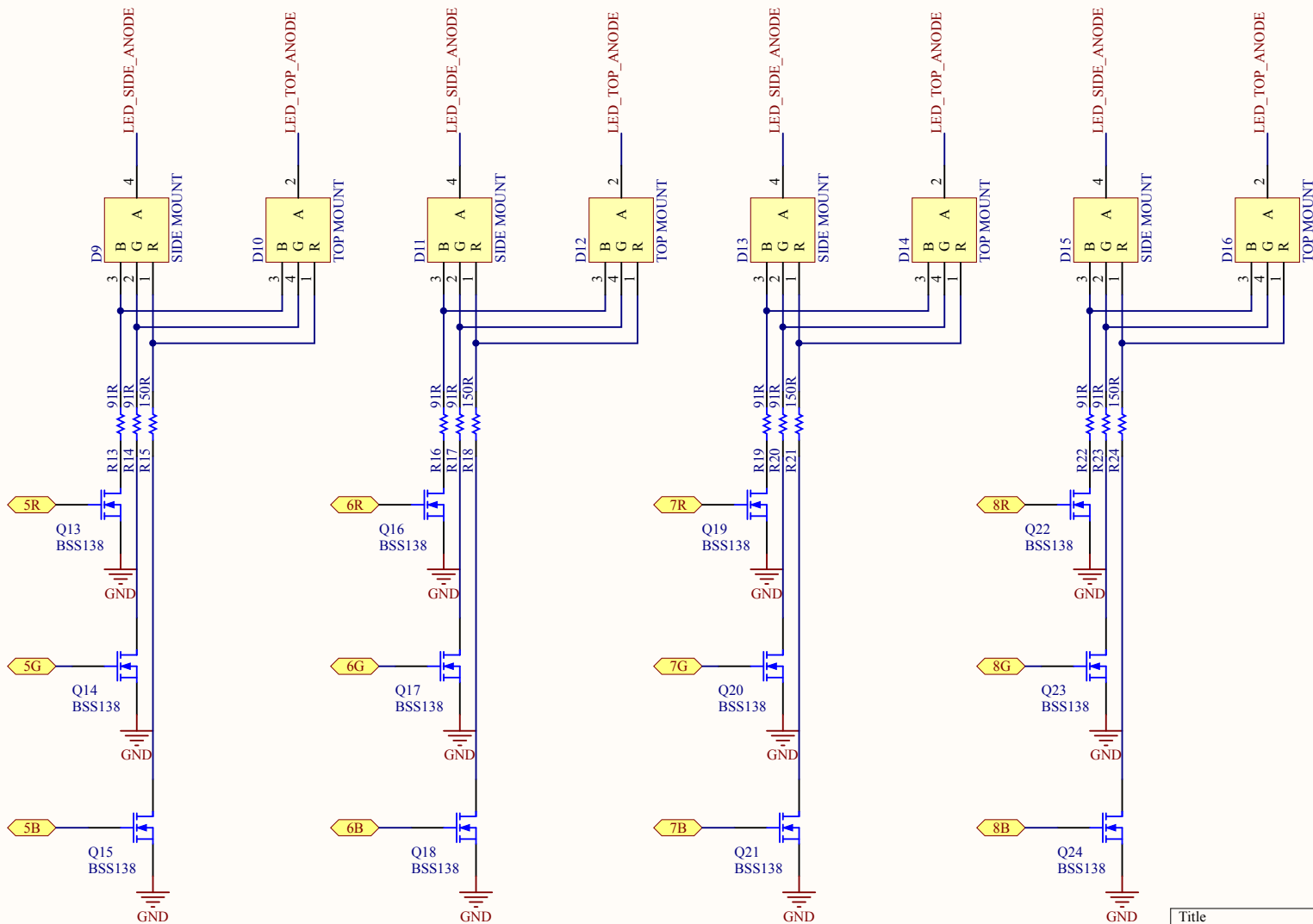
1

2

3

4

LED5-8 SIDE EN_n LED_SIDE_ANODE
LED5-8 TOP EN_n LED_TOP_ANODE



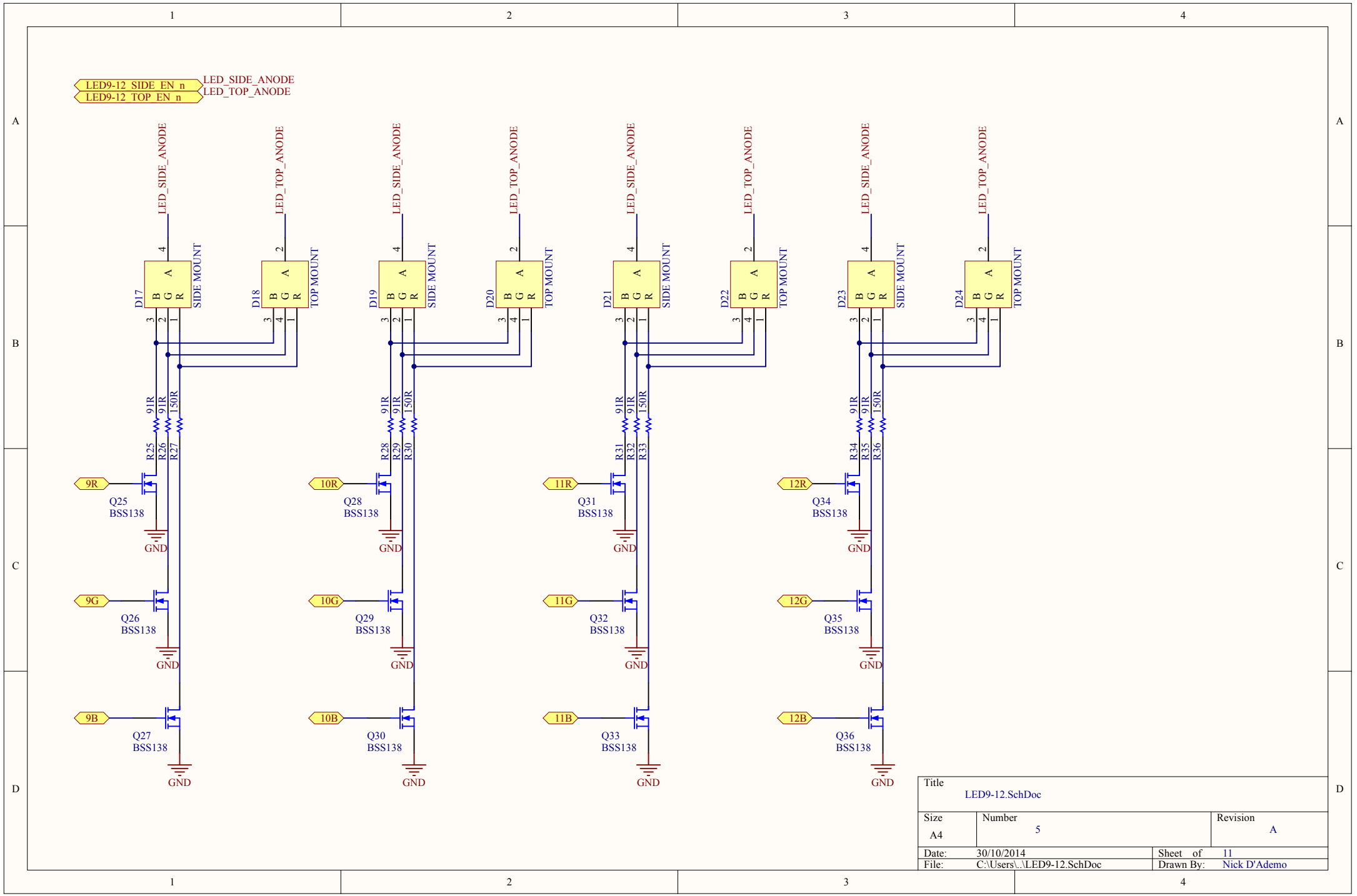
Title LED5-8.SchDoc		
Size A4	Number 4	Revision A
Date: 30/10/2014	Sheet of 11	
File: C:\Users\...\LED5-8.SchDoc	Drawn By: Nick D'Ademo	

1

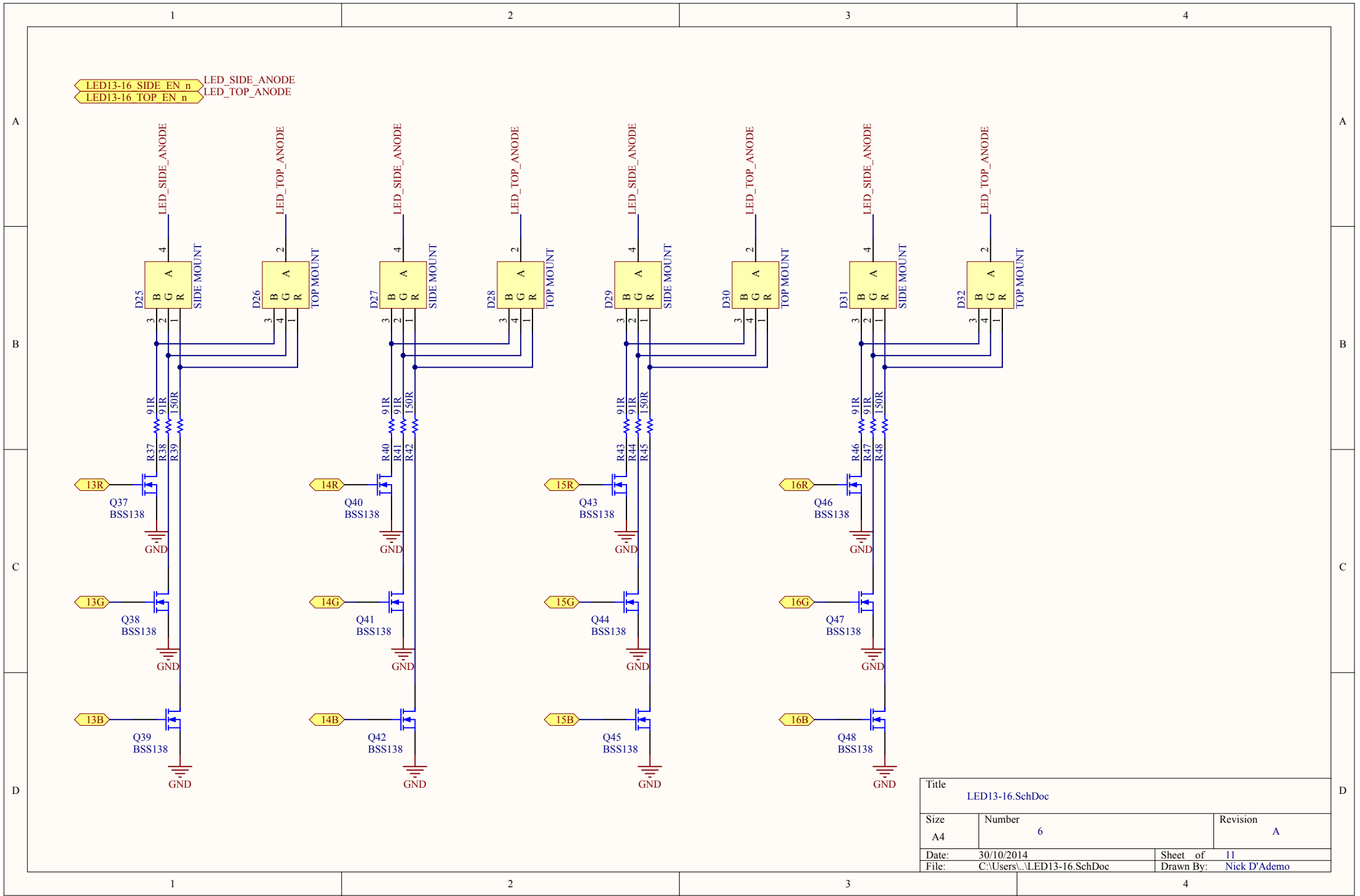
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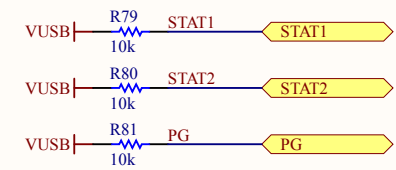
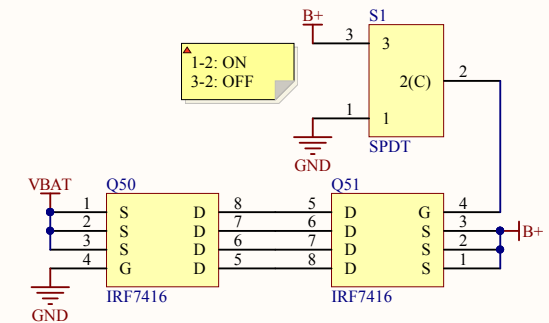
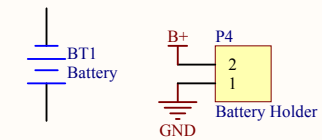
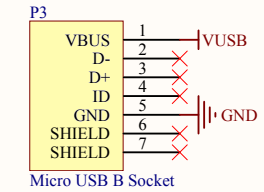
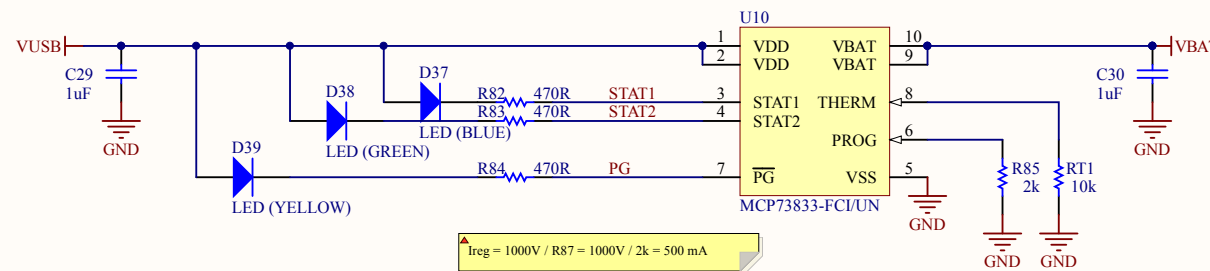
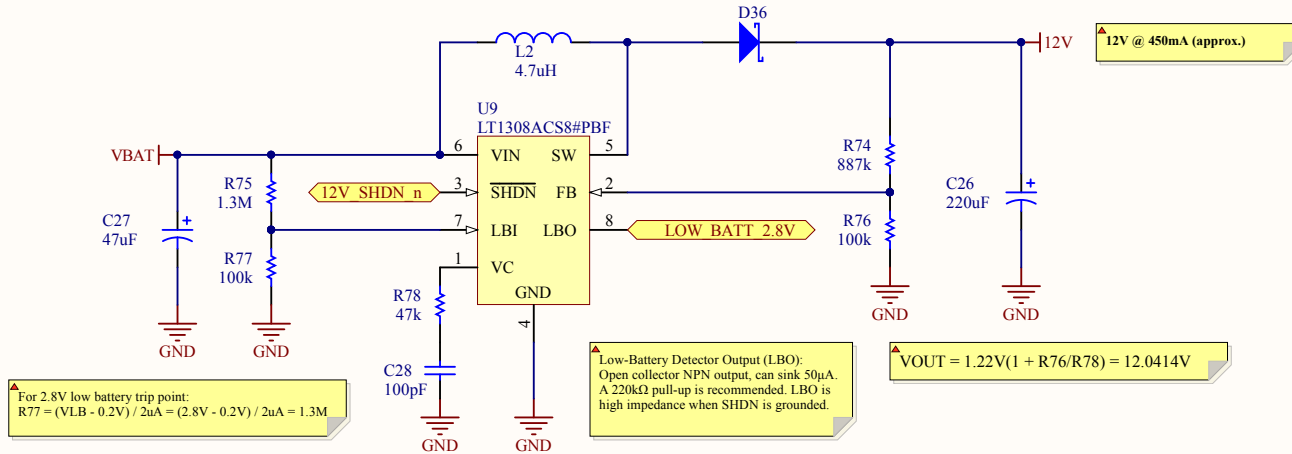
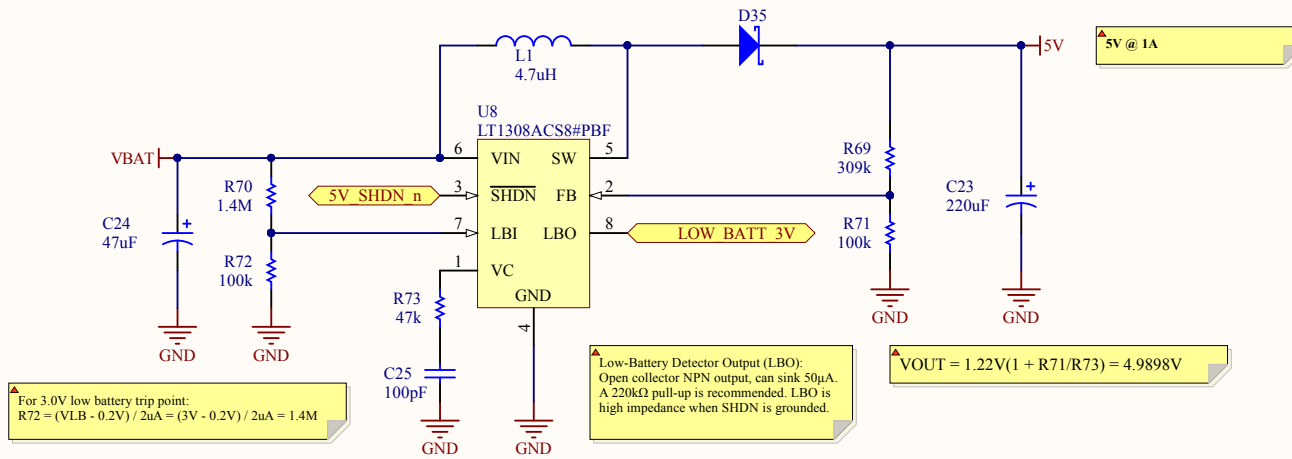
3

4



Title		
LED9-12.SchDoc		
Size	Number	Revision
A4	5	A
Date:	30/10/2014	Sheet of 11
File:	C:\Users\...\LED9-12.SchDoc	Drawn By: Nick D'Ademo





Title Power Supply.SchDoc			
Size A4	Number 7	Revision A	
Date:	30/10/2014	Sheet of	11
File:	C:\Users\...\Power Supply.SchDoc	Drawn By:	Nick D'Ademo

▲ AMS light sensors (www.ams.com) have the following pin-outs:
GND - 1
VDD - 2
OUT - 3

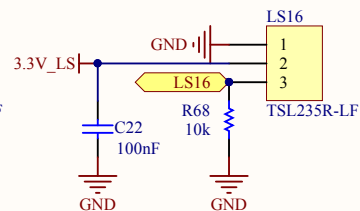
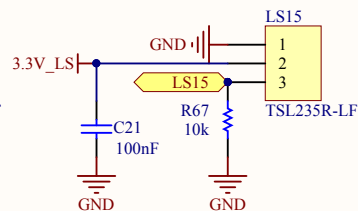
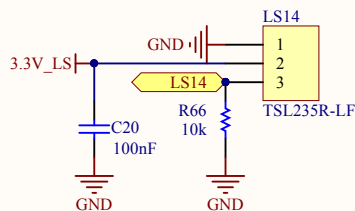
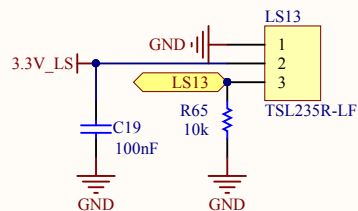
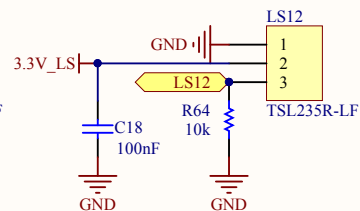
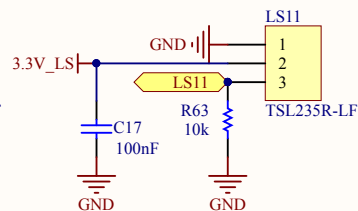
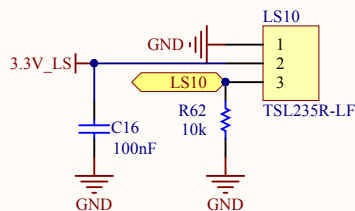
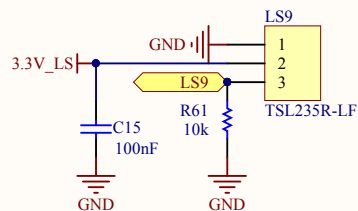
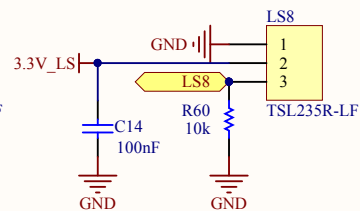
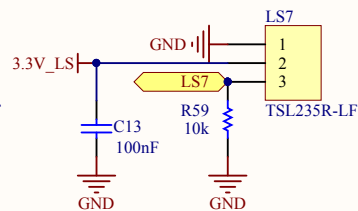
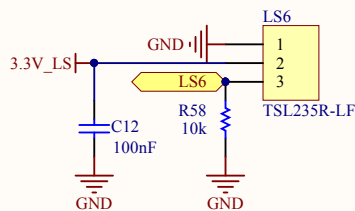
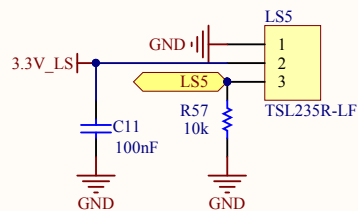
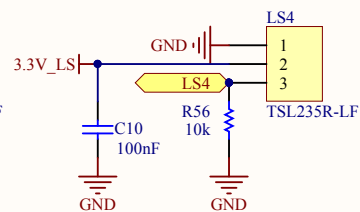
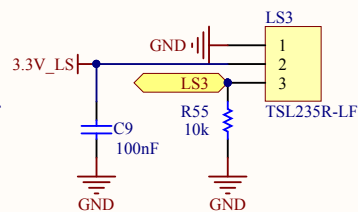
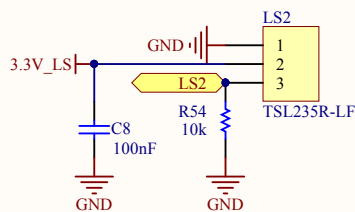
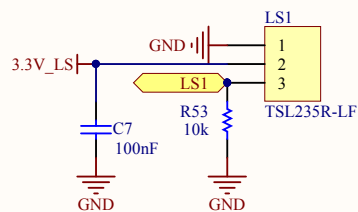
Light-to-Frequency parts:

TSL235
TSL237
TSL245 (IR light)

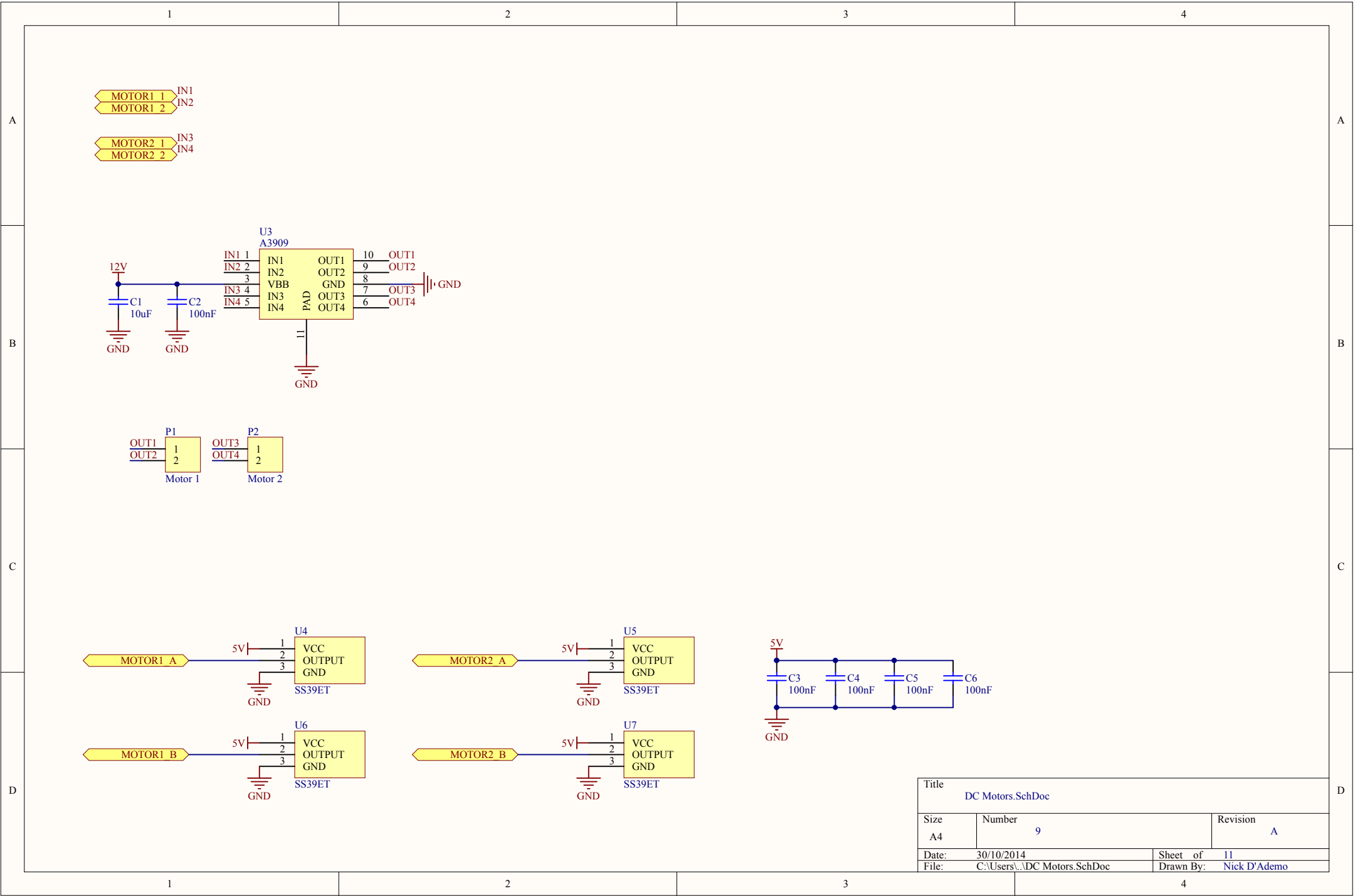
Light-to-Voltage parts:

TSL125
TSL135
TSL145
TSL250R
TSL251R
TSL252R
TSL253R
TSL254R
TSL257
TSL260R (IR light)
TSL261R (IR light)
TSL262R (IR light)
TSL267 (IR light)

▲ Only install R55 to R70 if Light-to-Voltage parts are used.



Title Light Sensors.SchDoc			
Size A4	Number 8	Revision A	
Date:	30/10/2014	Sheet of	11
File:	C:\Users\...\Light Sensors.SchDoc	Drawn By:	Nick D'Ademo



OUT1

OUT2

P1

1

2

OUT3

OUT4

P2

1

2

Motor 1

Motor 2

U4

SS39ET

1

2

3

5V

GND

MOTOR1 A

U6

SS39ET

1

2

3

5V

GND

MOTOR1 B

U5

SS39ET

1

2

3

5V

GND

MOTOR2 A

U7

SS39ET

1

2

3

5V

GND

MOTOR2 B

C3

100nF

C4

100nF

C5

100nF

C6

100nF

5V

GND

Title			
DC Motors.SchDoc			
Size	Number	Revision	
A4	9	A	
Date:	30/10/2014	Sheet of	11
File:	C:\Users\...\DC Motors.SchDoc	Drawn By:	Nick D'Ademo

