

A|2

TOTAL NO. OF SHEETS

1

2

3

4

5

6

7

A

B

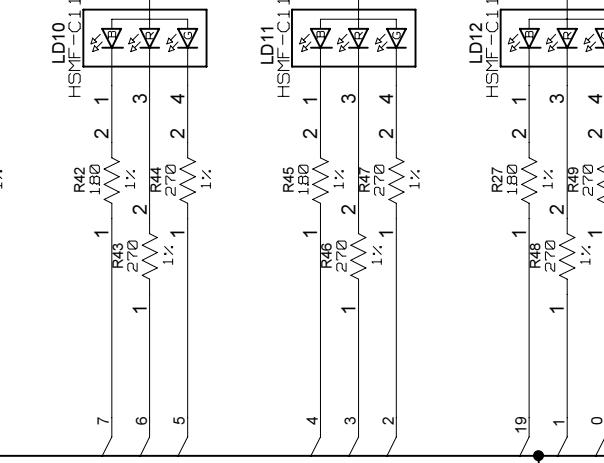
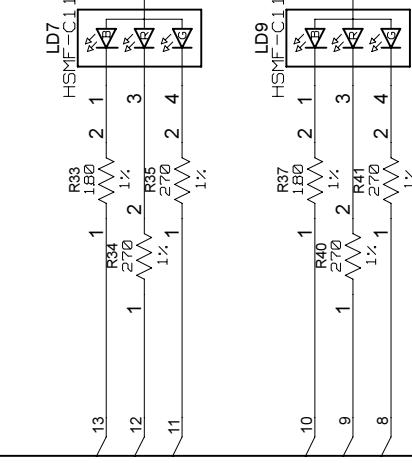
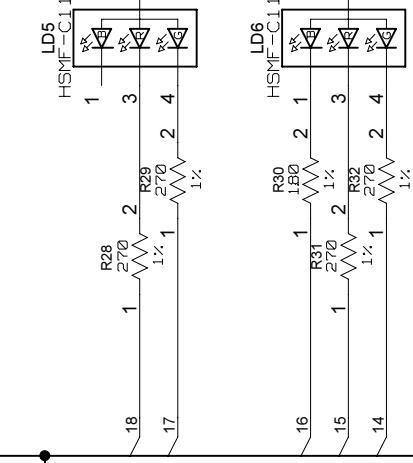
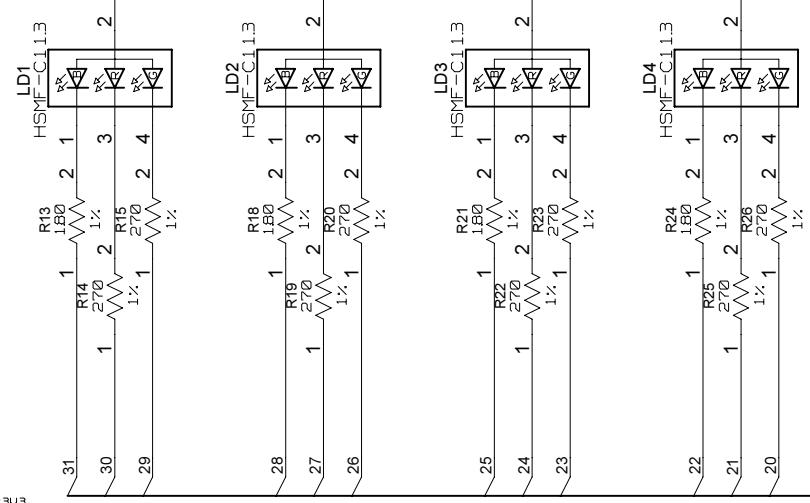
C

A

B

C

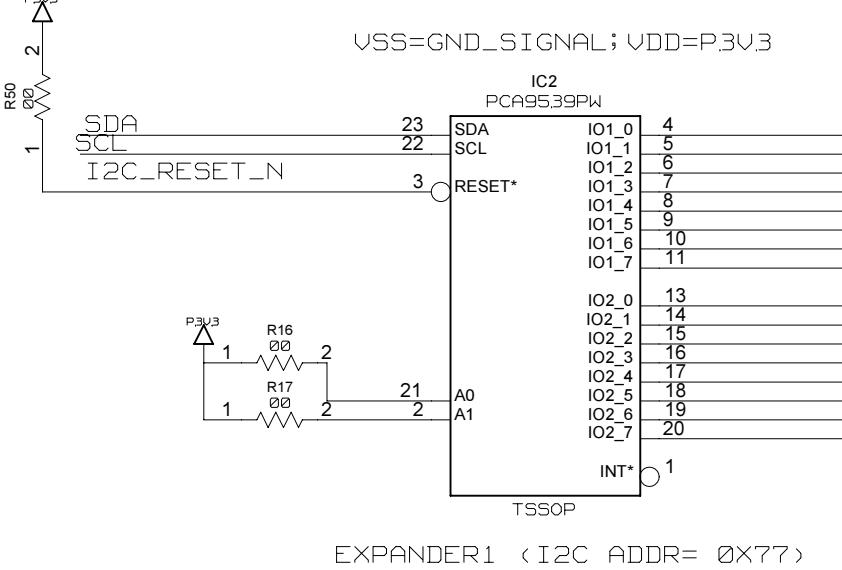
LDS IS POSITIONED  
OVER CLOCK I/O



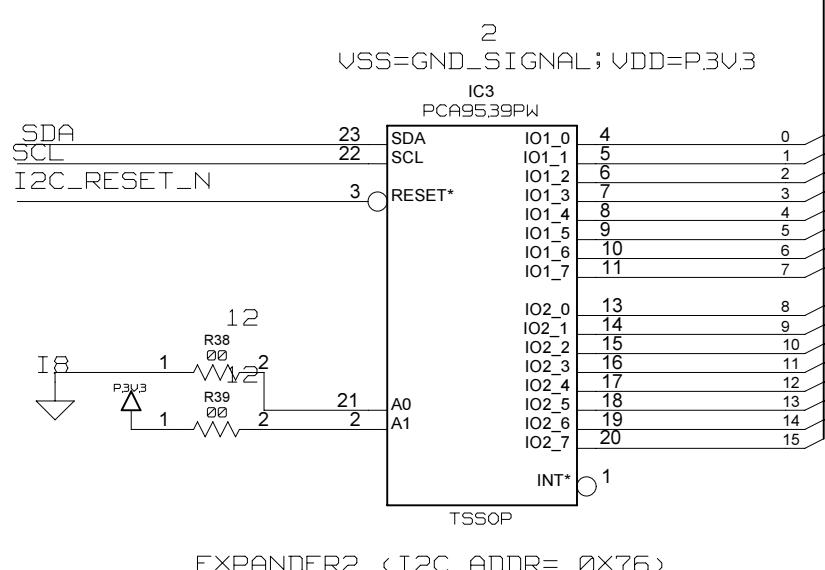
STRANGE NUMBERING 0, 1, 19  
DUE TO BUG IN FIRST VERSION

HSMF-C113, IF=10mA , VS = .3.3V , 5V  
INGAN BLUE , VF= .3.18V, R=12 , 182  
ALINGAP RED , VF = 1.8V, R=150 , 320  
ALINGAP GREEN, VF = 1.95V, R=135 , 305

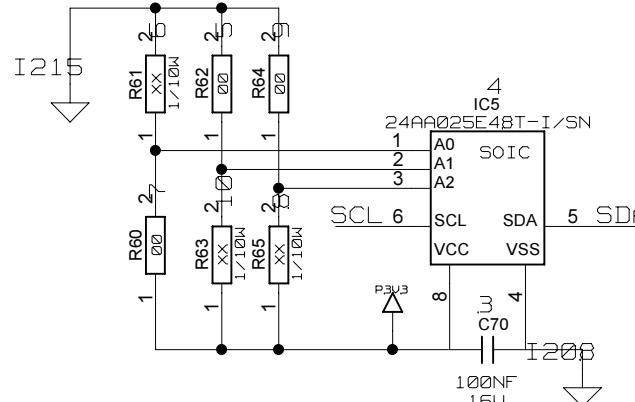
LED<31..0> HSMG-C150 VF=2.2V  
12V: R= 980 OHMS  
5V: R= 280 OHMS



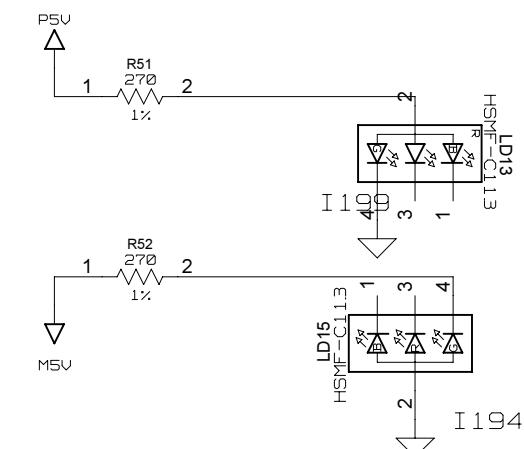
EXPANDER1 < I2C ADDR= 0X77 >



EXPANDER2 < I2C ADDR= 0X76 >



I2C EEPROM < ADDR= 0X50 >  
CONTAINS PRE-PROGRAMMED  
UNIQUE ID CODE



ISSUE	DATE	MOD NO.	DRN BY.	CHKD.	APPD.	STATUS
USED ON						
<b>UOB-HEP</b> UNIVERSITY OF BRISTOL HIGH ENERGY PHYSICS GROUP						
H.H.WILLS PHYSICS LAB, TYNDALL AVE, BRISTOL, BS8 1TL.						
TITLE	fmc_tlu_v1_ib	I2C I/O EXTENDERS				
MODULE:	fmc_tlu_leds_pmt_pwr					
LICENSED UNDER THE TAPR OPEN HARDWARE LICENSE (WWW.TAPR.ORG/OHL)						
MODULE PAGE: 2 OF 3						
OVERALL PAGE: 2 OF 3						
TOTAL NO. OF SHEETS						

A2

1 | 2 | 3 | 4 | 5 | 6 | 7

A

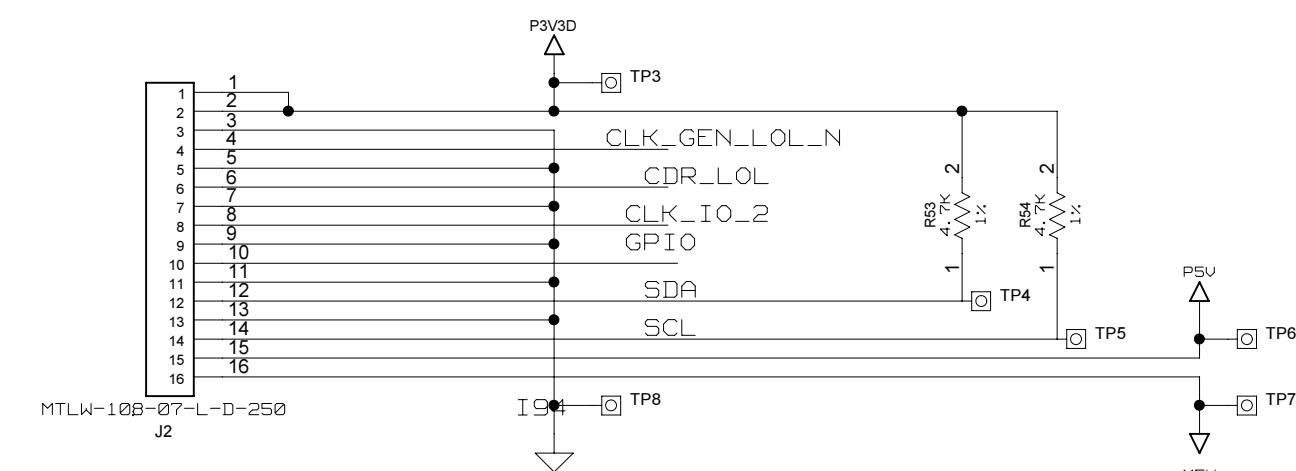
A

B

B

C

C



	Tue Oct 24 15:58:40 2017					
ISSUE	DATE	MOD NO.	DRN BY.	CHKD.	APPD.	STATUS
USED ON						

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**UOB-HEP**  
UNIVERSITY OF BRISTOL  
HIGH ENERGY PHYSICS GROUP

TITLE fmc\_tlu\_v1\_lib  
MODULE: fmc\_tlu\_leds\_pmt\_pwr

INPUT SIGNAL CONNECTOR

LICENSED UNDER THE TAPR OPEN HARDWARE LICENSE ([WWW.TAPR.ORG/OHL](http://WWW.TAPR.ORG/OHL))

**A2**

MODULE PAGE: 3 OF 3  
OVERALL PAGE: 3 OF 3

TOTAL NO. OF SHEETS