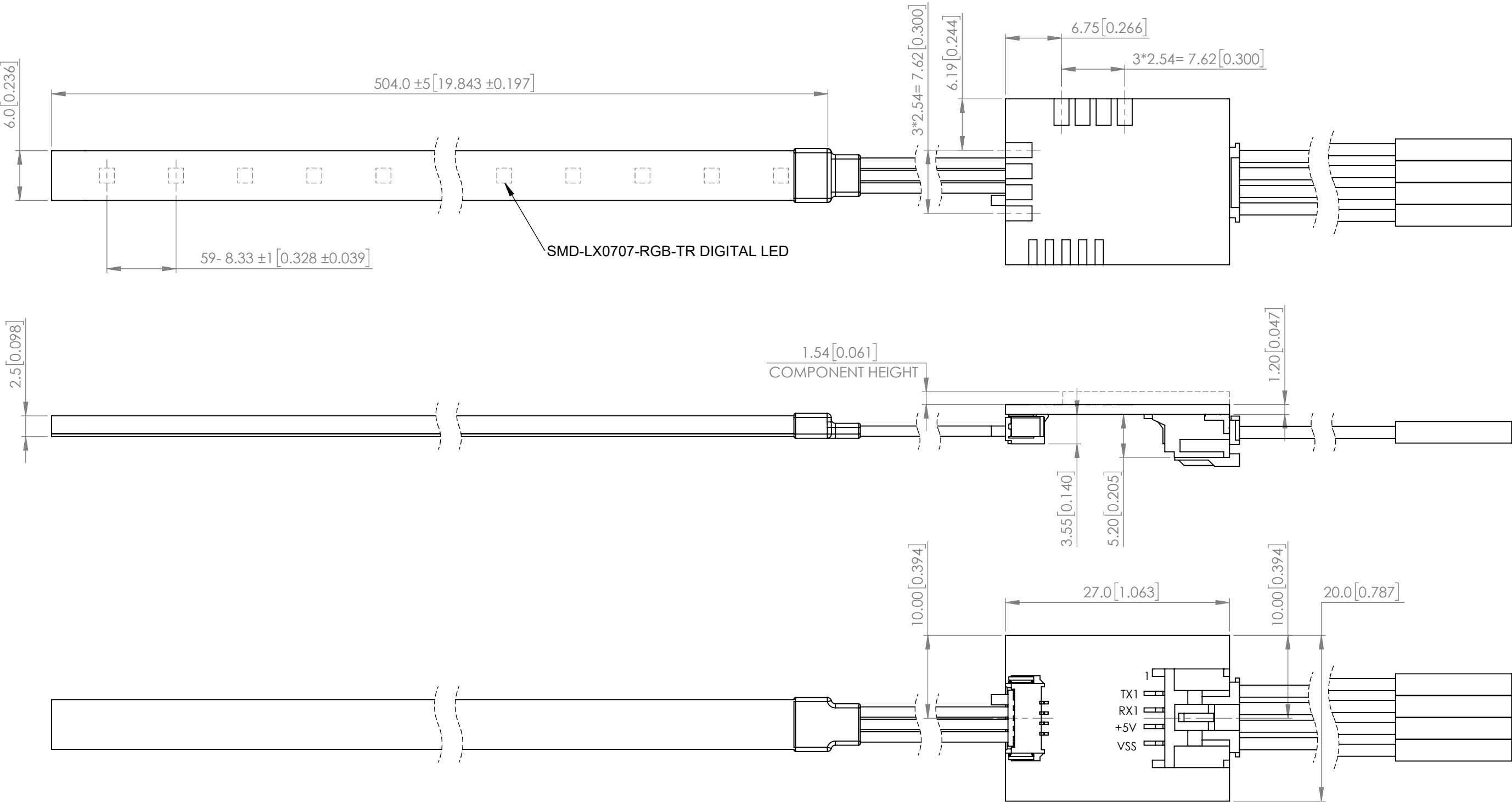


PART NUMBER		SMS-50006-60-G5UR	REV	A
REV	E.C.N. NUMBER AND REVISION COMMENTS			DATE
A	ECN-Lumex201900084			06.24.19



			PART NUMBER	SMS-50006-60-G5UR	REV	A
ezDisplay RGB Ring and Stripe Command List						
Code	Function	Driver IC embedded RGB LED Ring and Strip has 256 grayscale for each primary color (R,G,B)				
		Instruction of AT Command mode			API for C code	
0xc0	Set the color of desinated pixel	1. atc0=(address of pixel, grayscale of R 0~255, grayscale of G 0~255, grayscale of B 0~255) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> atc0=(0,255,255,0)			printf("atc0=(%d,%d,%d,%d)",address,R,G,B); while (USART_ReceiveData(UART1)!= 'E') {}	
0xc1	Set the color of desinated pixels within a section	1. atc1=(address of the start pixel, address of the end pixel, grayscale of R 0~255, grayscale of G 0~255, grayscale of B 0~255) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> atc1=(18,25,0,100,0)			printf("atc1=(%d,%d,%d,%d,%d)",address1,address2,R,G,B); while (USART_ReceiveData(UART1)!= 'E') {}	
0xc2	Set the color randomly for each pixel of ring	1. atc2=() 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> atc2=()			printf("atc2=()"); while (USART_ReceiveData(UART1)!= 'E') {}	
0xc3	Turn the ring pixels clockwise one round	1. atc3=(speed of turning 1~30) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> atc3=(10)			printf("atc3=(%d)",speed); while (USART_ReceiveData(UART1)!= 'E') {}	
0xc4	Turn the ring pixels counter clockwise one round	1. atc4=(speed of turning 1~30) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> atc4=(10)			printf("atc4=(%d)",speed); while (USART_ReceiveData(UART1)!= 'E') {}	
0xc5	Turn one pixels Clockwise	1. atc5=(speed of shifting 1~30) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> atcb=(10)			printf("atc5=(%d)",speed); while (USART_ReceiveData(UART1)!= 'E') {}	
0xc6	Turn one pixels Counter clockwise	1. atc6=(speed of shifting 1~30) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> atcc=(10)			printf("atc6=(%d)",speed); while (USART_ReceiveData(UART1)!= 'E') {}	
*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN= ^{+DECIMAL PRECISION} _{-0.00} MAX.= ^{+0.00} _{-DECIMAL PRECISION}						
 425 N. GARY AVE. CAROL STREAM, IL 60188 PHONE : 800-278-5666 FAX : 630-315-2150 WEB : WWW.LUMEX.COM		STRIP LED, 6(W)*504(L)mm, WITH 60PCS SMD-LX0707-RGB-TR DIGITAL LEDs, DC_5V, 4.5W(TYP), STRIP SURFACE IP 65, WITH LDR-Controller-Lite.			DATE : 2019.06.24	DRAWN BY : C.S.
		THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICE. CONFIDENTIAL INFORMATION THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY LUMEX INC., THE HOLDER OF THIS DOCUMENT SHALL KEEP ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL AND SHALL PROTECT SAME IN WHOLE OR IN PART FROM DISCLOSURE AND DISSEMINATION TO ALL THIRD PARTIES.			PAGE : 2 OF 5	CHKD BY : E.C.
					SCALE : NTF	APRVD BY : G.Y.
					UNIT : mm [INCH]	

				PART NUMBER	SMS-50006-60-G5UR	REV	A
Driver IC embedded RGB LED Ring and Strip has 256 grayscale for each primary color (R,G,B)							
Code	Function	Instruction of AT Command mode			API for C code		
0xc7	Flash one desinated pixle	1. atc7=(address of pixel, speed of flashing 1~100) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> atc7=(0,50)			printf("atc7=(%d,%d)",address,speed); while (USART_ReceiveData(UART1)!= 'E') {}		
0xc8	Flash desinated pixels within a section	1. atc8=(address of the start pixel, address of the end pixel, speed of flashing 1~100) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> atc8=(2,5,50)			printf("atc8=(%d,%d,%d)",address1,address2,speed); while (USART_ReceiveData(UART1)!= 'E') {}		
0xc9	Flash whole ring	1. atc9=(speed of flashing 1~100) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> atc9=(50)			printf("atc9=(%d)",speed); while (USART_ReceiveData(UART1)!= 'E') {}		
0xca	Breath effect of whole ring for 7 major colors	1. atca=(0 or 1 for R, 0 or1 for G, 0 or 1 for B) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> atca=(0,0,1)			printf("atca=(%d,%d,%d)",R,G,B); while (USART_ReceiveData(UART1)!= 'E') {}		
0xcd	Set the dynamic fuction's color	1. atcd=(grayscale of R 0~255, grayscale of G 0~255, grayscale of B 0~255) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> atcd=(128,9,18)			printf("atcd=(%d,%d,%d)",R,G,B); while (USART_ReceiveData(UART1)!= 'E') {}		
0xce	Set the dynamic fuction's speed	1. atce=(speed 1~100) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> atce=(5)			printf("atce=(%d)",speed); while (USART_ReceiveData(UART1)!= 'E') {}		
0xcf	Set the pixel number of ring	1. atcf=(number of pixels of ring 1~120) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> atcf=(48)			printf("atcc=(%d)",Number_of_Pixel); while (USART_ReceiveData(UART1)!= 'E') {}		
*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN= ^{+DECIMAL PRECISION} _{-0.00} MAX.= ^{+0.00} _{-DECIMAL PRECISION}							
LUMEX® Creating LED and LCD Solutions Together™ 425 N. GARY AVE. CAROL STREAM, IL 60188 PHONE : 800-278-5666 FAX : 630-315-2150 WEB : WWW.LUMEX.COM		STRIP LED, 6(W)*504(L)mm, WITH 60PCS SMD-LX0707-RGB-TR DIGITAL LEDs, DC_5V, 4.5W(TYP), STRIP SURFACE IP 65, WITH LDR-Controller-Lite.			DATE : 2019.06.24		DRAWN BY : C.S.
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					SCALE : NTF		APRVD BY : G.Y.
					UNIT : mm [INCH]		

		PART NUMBER	SMS-50006-60-G5UR	REV	A
Code	Function	Driver IC embedded RGB LED Ring and Strip has 256 grayscale for each primary color (R,G,B)			
		Instruction of AT Command mode		API for C code	
0xd0	Clear display	1. atd0=() 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> atd0=()		printf("atd0=()"); while (USART_ReceiveData(UART1)!= 'E') {}	
0x10	Fill pixel one by one, strat from last pixel	1. at10=(grayscale of R 0~255, grayscale of G 0~255, grayscale of B 0~255, speed of filling 1~30) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> at10=(0,105,0,5)		printf("at10=(%d,%d,%d,%d)",R,G,B,speed); while (USART_ReceiveData(UART1)!= 'E') {}	
0x11	Fill pixel one by one, strat from first pixel	1. at11=(grayscale of R 0~255, grayscale of G 0~255, grayscale of B 0~255, speed of filling 1~30) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> at11=(0,105,0,2)		printf("at11=(%d,%d,%d,%d)",R,G,B,speed); while (USART_ReceiveData(UART1)!= 'E') {}	
0x12	Stack pixel one by one clockwise then turn off pixel counterclockwise	1. at12=(grayscale of R 0~255, grayscale of G 0~255, grayscale of B 0~255, speed of stacking 1~30) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> at12=(0,10,255,5)		printf("at12=(%d,%d,%d,%d)",R,G,B,speed); while (USART_ReceiveData(UART1)!= 'E') {}	
0x13	Stack pixel one by one counterclockwise then turn off pixel clockwise	1. at13=(grayscale of R 0~255, grayscale of G 0~255, grayscale of B 0~255, speed of stacking 1~30) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> at13=(255,0,0,10)		printf("at13=(%d,%d,%d,%d)",R,G,B,speed); while (USART_ReceiveData(UART1)!= 'E') {}	
0x14	Two pixels collision then firework	1. at14=(grayscale of R 0~255, grayscale of G 0~255, grayscale of B 0~255, speed of stacking 1~30) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> at14=(0,255,0,10)		printf("at14=(%d,%d,%d,%d)",R,G,B,speed); while (USART_ReceiveData(UART1)!= 'E') {}	
0x15	Two stack pixels collision then firework	1. at15=(grayscale of R 0~255, grayscale of G 0~255, grayscale of B 0~255, speed of stacking 1~30) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> at15=(0,255,0,10)		printf("at15=(%d,%d,%d,%d)",R,G,B,speed); while (USART_ReceiveData(UART1)!= 'E') {}	

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	425 N. GARY AVE. CAROL STREAM, IL 60188 PHONE : 800-278-5666 FAX : 630-315-2150 WEB : WWW.LUMEX.COM	STRIP LED, 6(W)*504(L)mm, WITH 60PCS SMD-LX0707-RGB-TR DIGITAL LEDs, DC_5V, 4.5W(TYP), STRIP SURFACE IP 65, WITH LDR-Controller-Lite.	DATE : 2019.06.24	DRAWN BY : C.S.
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			PART NUMBER	SMS-50006-60-G5UR	REV	A
Code	Function	Driver IC embedded RGB LED Ring and Strip has 256 grayscale for each primary color (R,G,B)				
		Instruction of AT Command mode			API for C code	
0x16	Two pixels collision then bounce back	1. at16=(grayscale of R 0~255, grayscale of G 0~255, grayscale of B 0~255, speed of stacking 1~30) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> at16=(255,255,255,10)			printf("at16=(%d,%d,%d,%d)",R,G,B,speed); while (USART_ReceiveData(UART1)!= 'E') {}	
0x17	Two stack pixels collision then fade back	1. at17=(grayscale of R 0~255, grayscale of G 0~255, grayscale of B 0~255, speed of stacking 1~30) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> at17=(0,255,100,10)			printf("at17=(%d,%d,%d,%d)",R,G,B,speed); while (USART_ReceiveData(UART1)!= 'E') {}	
0xf2	Set the Dimming level * Only available for Dimmable LEDs	1. atf2=(Dimming level 0~31) 2. Wait until receive a device available byte ('E') from Ring or Stripe <example> atf2=(7)			printf("atf2=(%d)",Dimming); while (USART_ReceiveData(UART1)!= 'E') {}	
0xfd	Set the dynamic function	1. atfd=(Function Code 0~20) 2. Wait until receive a device available byte ('E') from Ring or Stripe <Function code> 0 : Stop the auto run back to static mode 1~20 are auto run mode. The display speed and color can be determinated by atcc and atcd command accordingly 1: Breath (for red, green, blue, yellow, cyan, magenta & white only) 2: Randomly color display for whole ring 3: Turn one pixel clockwise 4: Turn one pixel counter clockwise 5: Turn comet section pixels clockwise (for red, green, blue, yellow, cyan, magenta & white only) 6: Turn comet section pixels counter clockwise (for red, green, blue, yellow, cyan, magenta & white only) 7: Comet section pixels bounce around (for red, green, blue, yellow, cyan, magenta & white only) 8: Turn ring display menory data clockwise (Ring display memory can be determinated by atc0 or atc1command) 9: Turn ring display menory data counter clockwise (Ring display memory can be determinated by atc0 or atc1command) 10: Flash whole ring 11: Fill pixel one by one start from last pixel 12: Fill pixel one by one start from first pixel 13: Fill pixel one by one clockwise then disappear one by one counter clockwise 14: Fill pixel one by one clockwise then disappear one by one clockwise 15: Show the ring display memory data one by one then disappear one by one counter clockwise 16: Show the ring display memory data one by one then disappear one by one clockwise 17: Two pixels collide then firework effect 18: Two section pixels collide then firework effect 19: Two pixels crossing 20: Two pixels collide then bounce back			printf("atfd=(%d)",Function); while (USART_ReceiveData(UART1)!= 'E') {}	