

LED Workshop User Guide

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Development Environment

System Configuration

LED Editor	
Load	display file
	Workshop System
Workshop Interface	e-Link Flat Cable (Evaluation Mode)
California (1975)	(Professional Mode)

Software

HT16D3xA/B LED Workshop, HT16D3xA/B LED Editor and IDE-3000.

HT16D3xA/B LED Workshop

Used for master MCU selection, MCU resource allocation, key configuration, HT16D3xA/B driver pin setup, external Flash size and pin configuration, LED program settings as well as programming the FLASHROM data to the development board and other functions.

HT16D3xA/B LED Editor

Used for graphics editing and preview, implementing the HT16D3xA/B mode settings and other functions.

IDE-3000

Used for editing and viewing the source program, downloading the program code and PROM data to the development board via the e-link.

Hardware

The Holtek LED Workshop supported Development boards or customer development boards and the e-link (BICE000ELINK0B).

LED Workshop Supported Development Boards

Development Board Types

- Eight Top Boards:
 - 1 ESK-16D31B-C00, used when the HT16D31B COLOR mode is selected.
 - ② ESK-16D33A-C00, used when the HT16D33A COLOR mode is selected.
 - 3 ESK-16D31B-M00, used when the HT16D31B MONO mode or GRAY mode is selected.

- (4) ESK-16D33A-M00, used when the HT16D33A MONO mode or GRAY mode is selected.
- 5 ESK-16D35A-C00, used when the HT16D35A COLOR mode is selected.
- 6 ESK-16D35B-C00, used when the HT16D35B COLOR mode is selected.
- T ESK-16D35A-M00, used when the HT16D35A MONO mode or GRAY mode is selected.
- ⑧ ESK-16D35B-M00, used when the HT16D35B MONO mode or GRAY mode is selected.
- One General Bottom Board: ESK-LED-100





Data Storage

- MCU Internal PROM (Master MCU: HT66F2390)
- External FLASHROM (SST26VF032B)

e-link Connection

Users can develop the required development board on their own. However, due to downloading program and data requirements, the connection with the e-link needs to obey the rules which are shown in the figure below to make sure the programming is correct.





Start the Software

Double-click the	🚥 LED Workshop	icon and the following screen will appear.	
🚥 LED Workshop		- 0	×
Project Name:		New Project Load Project Save Project Save New Project	<u> </u>
Basic Setting			
LED Program			
Finish			

Language Selection

Click the $\boxed{1}$ icon in the upper right for the language selection.





Create a New Project

The LED Workshop has two modes which are the Evaluation Mode and the Professional Mode. The Evaluation Mode needs to be demonstrated with the HT16D3xA/B EV Boards that have been developed by Holtek. The Professional Mode is provided to allow customers to use their own development boards. The following sections will describe how to create a new project in these two modes.

Evaluation Mode

After completing the development board and the e-link connection, start the LED Workshop and then click the "New Project" button. A New Project dialog box will pop up as shown below. Then select the corresponding built-in mode according to the connected EV Board and click "OK" after completing the related settings.

	– 🗆 X
New Project Load Project Save Pr	roject Save New Project
New Project X	
Brainet Name:	
Project Path:	
Evaluation Mode C Professional Mode	
(built-in code) (user code + library)	The companying
IC HT16D31A 🗸	development beard in the
	Evolution Mode
Color 🔽	Evaluation Wrode
Matrix Type	50% 165010 000
(X*Y)/Single	ESK-I6D3IA-C00
Interface SPI	ESK-16D31A-C00
	ESK-16D31A-M00_Mono
EV Board ESK-16D31A-CUU	ESK-16D31A-IVIUU_Gray
	ESK-16D31B-M00 Mono
OK	



The LED Workshop operation includes three steps which are "Basic Setting", "LED Program" and "Finish".

ELED Workshop				- 0	
	New Project	Load Project	Save Project	Save New Project	
Basic Setting					
LED Program					
Finish					

Basic Setting

Available MCUs

The supported MCUs are shown in the following table, here only the HT66F2390 is shown.

Available M	CU:	
HT66F2390		

MCU Resources

The configurable MCU resource options are the package, the high speed oscillator (FreqH), the low speed oscillator (FreqL) and the reset circuit.





Key, Driver IC, Display Source

Click the HT66F2390 in the "Available MCU" table, and then setup the keys, driver IC and display source which are the necessary options. The interface in the following figure shows the mode in which the data is stored in the internal PROM. Here the used memory size (see the blue box below) should be noted. If it is exceeded, an external flash memory will be required to store the display data. In the Evaluation Mode, if the development board is selected which means the key pins, driver pins and communication interface pins are determined, there is no need to choose them again.



External Flash

To save data into the FLASHROM, click the "External Flash" icon and select the Flash size based on the size of the soldered FLASHROM on the board.





Pin Settings

All pin settings will be shown in the diagram. The complete information can be viewed by dragging the slide bar.

🚥 LED Workshop	[C:\Users\llx03	5\Documents\HTK_Project\Untitled]			- 0	×
Project Name:	Untitled		New Proje	ect Load Project Save Project	Save New Project	
Basic Setting LED Program Finish		Mode Selection Image: Constraint of the selection of the sel	PO7 13 SCK 14 PA1/SCS 15 OCOSCO 16 SDO 17 PA4/SDI 18 OCOSDA 19 SCS1 20 SCS2 21 VDD 22 VDD 22 VDD 22 VDD 22 PH0 24 PH1 25 PE0/SCSA 28 PE1/SDOA 27	Available MCU: HT66F2390 MCU Resource: ROM: 64Kx16 RAMage (#LQFP-A Value Available MCU:	52 PD1 51 PD0 50 PC7 49 PC6 48 Key6 47 Key5 46 Key4 45 Key3 44 Key2 43 Key1 42 AVSS 41 PF5 40 PF4 38 AVDD 38 PO0	



LED Program

Add Trigger Source

Click the "LED Program" on the left to enter the project logical design page. After clicking on the dashed box, the available trigger sources will be displayed in the dashed box. In the Evaluation Mode, the trigger source is the key.

📼 LED Workshop	[C:\Users\llx03	5\Documents\HTK_Project\Untitled]			-	
Project Name:	Untitled		New Project	Load Project S	ave Project Save New	Project
Basic Setting		Display Program List Trigger Source Trigger So	urce Name	Function		<u>^</u>
LED Program						
Finish		Available Trigger Source		1		
Γ	Display	Program List				ר
	Trigg	er Source Trigger	r Source Name	Þ	Function Play]



Add Display Actions

Click the "Play" button to set the functions, and then click the "+" button to add the display actions.

	Play action settings X
Display Program List Trigger Source Name Function Key1 Control Control Cont	FielAunber I Ndrame Untdied.low France I Page: I Staying Time Ome Action Filome OK
	None None Shift Fade

The workshop supports three actions: PLAY+NONE, PLAY+SHIFT and PLAY+FADE. They are controlled by the library functions.

- PLAY+NONE: Display a single frame figure and its function.
- PLAY+SHIFT: Move a single frame figure left or right. The movements can include rotation. The HT16D35A/B supports up, down, left or right movement.

Play action settings	ĸ
File Number 1	
Nickname Untitled.ldw	
Frame 1	
Page: 1	
Staying Time 0 ms	
Action Shift 💌	
Shift Direction Right	
Speed 248 ms 💌	
Shift Number 1	
Shift Loop 1	
Rotate Yes 💌	
OK	



• PLAY+FADE: Includes two operations which are Blink and Fade. The optional time for T1~T4 can be set variously. These two operation waveforms are shown in the figures below.

×
Fade 100% 261 261 261 261 0% T1 T2 T3 T4 Time 1044 Operation Blink \checkmark Inear \checkmark T1 261 ms \checkmark \checkmark Time 1044 Operation Blink \checkmark \checkmark Time 1044 T1 261 ms \checkmark \checkmark T1 T2 261 ms(T1 * 1) \checkmark T3 261 ms(T1 * 1) T4 261 ms(T1 * 1) \checkmark Blink Time: 4 s \checkmark
ОК
×
Fade 100% 261 261 261 261 0% T1 T2 T3 T4 Time 0% T1 T2 T3 T4 T1044 Operation Fade T T1044 T1044 Difference T T1 T261 ms T T1 261 ms(T1*1) T T3 261 ms(T1*1) T T4 261 ms(T1*1) T T Blink Time: 4 s T



Save Project

Click the "Save Project" button to save the current project after completing the settings. It will create a .pjlw file.

📼 LED Workshop [C:\Users\llx03	\Documents\HTK_Project\Untitled]			- 0	×
Project Name: Untitled		New Project Load Project	Save Project S	ave New Project	Ū
Basic Setting LED Program Finish	Display Program List Trigger Source Trigger Source Key 1 Key 2 Key 3 Key 4 Key 5 Key 6 Key 6 Key 6 Key 6 Key 6 Key 0 Command × 0	lame Function Image: Play Play Play	 ⇒ (

Finish

Click "Finish" on the left to enter the generating display data steps, execute the IDE project, etc.





Open IDE Project

To open the generated IDE files, follow the path: workshop Project Name\HT-IDE3000Prj\C or \land ASM. Use the e-link to connect with the development board and click the "execute" icon. Then the images which were setup in the LED Program page can be observed on the development board.

🗁 ASM					
Eile Edit View Favorites Tools	Help				
A Park . A .	Sourch Ch. Eddard				
	Polders				
Address 🛅 C:\Documents and Settings	s\holtek\My Documents\HTK_Project\Unt	titled\HT-IDE3000Pr	j\ASM		
	Name 🔺	Size	Туре	Date Modified	
File and Folder Tasks 🔗	E define.inc	5 KB	INC File	6/22/2017 5:27 PM	
	DISPLAY.ASM	170 KB	ASM File	7/19/2017 7:40 PM	
Make a new folder	DISPLAY.OBJ	54 KB	OBJ File	9/1/2017 1:02 PM	
Publish this folder to the Units	DISPLAY_IIC.ASM	38 KB	ASM File	7/19/2017 2:12 PM	
Web Change Akin Californi	DISPLAY_IIC.OBJ	1 KB	OBJ File	9/1/2017 1:02 PM	
Share this rolder	DISPLAY_MONO1.asm	33 KB	ASM File	7/17/2017 7:35 PM	
	DISPLAY_MONO1.OBJ	2 KB	OBJ File	9/1/2017 1:02 PM	
Other Places	DISPLAY_SPI.ASM	33 KB	ASM File	7/19/2017 10:40 AM	
	DISPLAY_SPI.OBJ	10 KB	OBJ File	9/1/2017 1:02 PM	
HT-IDE3000Prj	HT16D35_PLATFORM_ASM_V	2 KB	ASM File	6/21/2017 7:25 PM	
My Documents	HT16D35_PLATFORM_ASM_V	2 KB	OBJ File	9/1/2017 1:02 PM	
Shared Documents	🖬 HT66F2390.bin	128 KB	BIN File	9/1/2017 1:02 PM	
Mu Computer	🖬 HT66F2390.CV	129 KB	CV File	9/1/2017 1:02 PM	
S Hy comparer	🖬 HT66F2390.DBG	42 KB	DBG File	9/1/2017 1:02 PM	
My Network Places	🖬 HT66F2390.MAP	32 KB	MAP File	9/1/2017 1:02 PM	
	🖬 HT66F2390.MEM	2 KB	MEM File	9/1/2017 1:02 PM	
Details	🖬 HT66F2390.MTP	129 KB	MTP File	9/1/2017 1:02 PM	
Decails	and in the of 2000 lope	1 KB	OPT File	9/1/2017 1:02 PM	
ASM	國 HT66F2390.pjt×	3 KD	PUTAInie	9/1/2017 1:02 PM	🗆 🧆 🎘 🚟 🗄 🖑 🛞
File Folder	EMITE6F2390.TSK	129 KB	TSK File	9/1/2017 1:02 PM	
Date Modified: Today,	INITIAL.asm	24 KB	ASM File	7/17/2017 3:02 PM	
September 01, 2017, 1:02 PM	INITIAL.OBJ	7 KB	OBJ File	9/1/2017 1:02 PM	
	InterfaceMacro.inc	2 KB	INC File	9/1/2017 1:02 PM	
	E KEYSCAN.asm	10 KB	ASM File	6/22/2017 1:34 PM	
	KEYSCAN.OBJ	3 KB	OBJ File	9/1/2017 1:02 PM	
	LED_DATA.inc	6 KB	INC File	9/1/2017 1:02 PM	
	LEDsub_IIC.asm	21 KB	ASM File	7/19/2017 9:41 AM	
	ELEDsub_IIC.OBJ	1 KB	OBJ File	9/1/2017 1:02 PM	
	ELEDsub_SPI.asm	20 KB	ASM File	7/19/2017 9:40 AM	
	ELEDsub_SPI.OBJ	7 KB	OBJ File	9/1/2017 1:02 PM	
	El macro.inc	3 KB	INC File	6/15/2017 2:06 PM	
	U TimerInterrupt.asm	2 KB	ASM File	6/1/2017 3:38 PM	
	ImerInterrupt.OBJ	2 KB	OBJ File	9/1/2017 1:02 PM	
	EI USER_PROGRAM.ASM	4 KB	ASM File	6/5/2017 7:11 PM	
	I USER_PROGRAM.OBJ	2 KB	OBJ File	9/1/2017 1:02 PM	
	El variable.asm	18 KB	ASM File	//19/2017 4:12 PM	
	📼 variable.OBJ	13 KB	UBJ File	9/1/2017 1:02 PM	

View Images





Professional Mode

After completing the connection of the development board and the e-link, start the LED Workshop and click the "New Project" button. A New Project dialog box as shown below will pop up. Then click "OK" after completing the related settings.

🊥 LED Workshop	- 0	\times
Project Name:	New Project Load Project Save Project Save New Project	0
Basic Setting	New Project × Project Name: Untitled Project Path: C:VUsersUIx035\Documents\HTK_Project	
LED Program	C Evaluation Mode (built-in code) (user code + library)	
Finish	IC HT16D31A Color Color Color Color	
	Matrix Type (X*Y)∕Single Interface SPI	
	OK Cancel	



Basic Setting

Driver IC, Display Source

Click the HT66F2390 in the "Available MCU" table, and then setup the driver IC and display source which are necessary options. The interface in the following figure shows the mode and that the data is stored in the internal PROM.



External Flash

To save the data into the FLASHROM, click the "External Flash" icon and select the Flash size based on the size of the soldered FLASHROM on the board.





MCU Resources

The configurable MCU resource options are the package, the high speed oscillator (FreqH), the low speed oscillator (FreqL) and the reset circuit.



LED Program

Add Trigger Source

Click the "LED Program" on the left to enter the project logical design page. After clicking on the dashed box, the available trigger sources will be displayed in the dashed box. In the Professional Mode, the trigger source is the command.

📧 LED Workshop (\Users\lx035\Documents\HTK_Project\Untitled]	1
Project Name:	Untitled New Project Load Project Save Project Save New Project	t
Basic Setting LED Program Finish	Display Program List Trigger Source Name Function	
	Display Program List	
	Command 1 Play	



Add Display Actions

Click the "Play" button to set the functions, and then click the "+" button to add the display actions. In the Professional Mode, the workshop also supports three actions which are the PLAY+NONE, PLAY+SHIFT and PLAY+FADE. The following operation is the same as in the Evaluation Mode, so it is not described here.



Call Library Functions

The three actions of the PLAY+NONE, PLAY+SHIFT and PLAY+FADE mentioned above are controlled by dedicated library functions respectively. The following content will describe how to call these library functions. Currently the library functions can only be used when two HT16D3xA/B devices are driven.

HT16D31A/B&HT16D33A/B Calling Method

PLAY+NONE

void _PLAY_PICTURE_DISPLAY(INT8U LU8U_LDW_INDEX,INT8U LU8U_FRAME_INDEX,INT8U LU8U_PAGE_INDEX) Inlet parameters:

① LU8V_LDW_INDEX: The file No. of the LDW file which is selected in the added files

2 LU8V_FRAME_INDEX: The frame No. of the selected LDW file

③ LU8V_PAGE_INDEX: The page No. of the selected frame

Call method:

_PLAY_PICTURE_DISPLAY(INT8U_LU8V_LDW_INDEX,INT8U_LU8V_FRAME_INDEX,INT8U_LU8V_PAGE_INDEX)

Description: The Inlet parameters should be assigned first before calling the library function. In this example, they are the LU8V_LDW_INDEX, LU8V_FRAME_INDEX and LU8V_PAGE_INDEX. For example, set LU8V_LDW_INDEX=2, LU8V_FRAME_INDEX=1 and LU8V_PAGE_INDEX=1 and then call the function. The first page of the first frame in the No.2 LDW file will be displayed.



PLAY+SHIFT

void _PLAY_PICTURE_SHIFT_SETTING(INT8U DIRECTION,INT8U SPEED,INT8U SHIFT_NUM,INT8U SHIFT_LOOP,INT8U ROTATE)

Inlet parameters:

(1) DIRECTION: The image shifting direction

=0, right

=1, left

② SPEED: The image shifting speed

=0~255, the actual speed: shift the image once in the time of (248ms + setting value \times 8ms)

③ SHIFT_NUM: The column number that the image will be shifted every time

= $1 \sim 255$, the number of the left or right shifted columns.

④ SIFT_LOOP: The image shifting times

= $1 \sim 255$, the total times that the image will be shifted.

(5) Rotate: The image shifting includes rotation or not

=0: No rotation

=1: Rotation

Call method:

_PLAY_PICTURE_SHIFT_SETTING(INT8U DIRECTION,INT8U SPEED,INT8U SHIFT_NUM,INT8U SHIFT_LOOP,INT8U ROTATE)

Description: The Inlet parameters should be assigned first before calling the library function. In this example, they are the DIRECTION, SPEED, SHIFT_NUM, SHIFT_LOOP and ROTATE. For example, set DIRECTION=0, SPEED=1, SHIFT_NUM=1, LOOP=2 and ROTATE=1 and then call the function. The display effects: The image will move one column to the right in every 256ms, including rotation and move totally two times.

PLAY+FADE

void _PLAY_PICTURE_FIREFLY_SETTING(INT8U LGS,INT8U FBS,INT8U T1,INT8U T2,INT8U T3,INT8U T4)

Inlet parameters:

- ① LGS: Linear/Gamma effect select
 - =0, Linear
 - =1, Gamma
- 2 FBS: Fade/Blink effect select

=0, Fade

=1, Blink

③ T1: T1 time

=0~7 (0: off; 1: 256, 2: 512; 3: 1024; 4: 1536; 5: 2048; 6: 2560; 7: 3072) frame

④ T2: T2 time

=0~3 (0: T1×0.25; 1: T1×0.5; 2: T1; 3: T1×2)

⑤ T3: T3 time

=0~1 (0: T1; 1: T1×2)

⑥ T4: T4 time

=0~3 (0: T1×0.25; 1: T1×0.5; 2: T1; 3: T1×2)





Call method:

_PLAY_PICTURE_FIREFLY_SETTING(INT8U LGS,INT8U FBS,INT8U T1,INT8U T2,INT8U T3,INT8U T4)

Description: The Inlet parameters should be assigned first before calling the library function. In this example, they are the LGS, FBS, T1, T2, T3 and T4. For example, set LGS=0, FBS=1, T1=1, T2=1, T3=1 and T4=1 and then call the function. The effects: The time of the T1~T4 are all 1 time of T1, where the T1 value can be obtained from the corresponding datasheet.

HT16D35A/B Calling Method

Inlet parameter is variable

The Inlet parameters of the following functions must be variables.

PLAY+NONE

_PLAY_PICTURE_DISPLAY MACRO Play_Number,Frame

Inlet parameters:

① Play_Number: The file No. of the LDW file which is selected in the added files

② Frame: The frame No. of the selected LDW file

Call method:

_PLAY_PICTURE_DISPLAY GU8V_LDW_INDEX,GU8V_FRAME_INDEX

Description: Define two variables for storing data. In this example, they are the GU8V_LDW_ INDEX and GU8V_FRAME_INDEX. The two variables should be assigned first before calling the library function. For example, set GU8V_LDW_INDEX=2, and GU8V_FRAME_INDEX=1 and then call the function. The first frame of the No.2 LDW file will be displayed.



PLAY+SHIFT

_PLAY_PICTURE_SHIFT MACRO COLOR_Direction,COLOR_Speed,COLOR_ShiftNum,COLOR_ShiftLoop,COLOR_Rotate Inlet parameters:

1) COLOR_Direction: The image shifting direction

=0~3 (0: up; 1: down; 2: right; 3: left)

② COLOR_Speed: The image shifting speed

=0~255, the actual speed: shift the image once in the time of (96ms + setting value \times 8ms)

3 COLOR_ShiftNum: The row or column number that the image will be shifted every time

=1 \sim 255, the number of the up or down shifted rows or the left or right shifted columns.

④ COLOR_ShiftLoop: The image shifting times

= $1\sim255$, the total times that the image will be shifted.

⑤ COLOR_Rotate: The image shifting includes rotation or not

=0: No rotation

=1: Rotation

Call method:

_PLAY_PICTURE_SHIFT_GU8U_SHIFT_DIRECTION,GU8U_SHIFT_SPEED,GU8U_SHIFT_NUM,GU8U_SHIFT_LOOP,GU8U_SHIFT_ROTATE

Description: Define five variables for storing data. In this example, they are the GU8V_SHIFT_ DIRECTION, GU8V_SHIFT_SPEED, GU8V_SHIFT_NUM, GU8V_SHIFT_LOOP, and GU8V_SHIFT_ROTATE. The five variables should be assigned first before calling the library function. For example, set GU8V_SHIFT_DIRECTION=2, GU8V_ SHIFT_SPEED=1, GU8V_SHIFT_NUM=1, GU8V_SHIFT_LOOP=2, and GU8V_ SHIFT_ROTATE=1 and then call the function. The display effects: The image will move one column to the right in every 104ms, including rotation and move totally two times.

PLAY+FADE

_PLAY_PICTURE_FIREFLY MACRO COLOR_BFS,COLOR_T1,COLOR_T2,COLOR_T3,COLOR_T4,COLOR_Times

Inlet parameters:

1 COLOR_BFS: Blink/Fade effect select

=0, Blink

=1, Fade

2 COLOR_T1: T1 time

=0~3 (0: 0.5s; 1: 1.0s; 2: 1.5s; 3:2.0s)

③ COLOR_T2: T2 time

=0~3 (0: 0.5s; 1:1.0s; 2: 1.5s; 3:2.0s)

④ COLOR_T3: T3 time

=0~3 (0: 0.5s; 1:1.0s; 2: 1.5s; 3:2.0s)

⑤ COLOR_T4: T4 time

=0~3 (0: 0.5s; 1:1.0s; 2: 1.5s; 3:2.0s)

6 COLOR_Times:

= $1 \sim 255$, the number of the image flashing times





Call method:

_PLAY_PICTURE_FIREFLY_GU8U_FIREFLY_FADE,GU8U_FIREFLY_T1,GU8U_FIREFLY_T2,GU8U_FIREFLY_T3,GU8U_FIREFLY_T4,GU8U_FIREFLY_CYCLETIME

Description: Define six variables for storing data. In this example, they are the GU8V_FIREFLY_ FADE, GU8V_FIREFLY_T1, GU8V_FIREFLY_T2, GU8V_FIREFLY_T3, GU8V_ FIREFLY_T4, and GU8V_FIREFLY_CYCLETIME. The six variables should be assigned first before calling the library function. For example, set GU8V_FIREFLY_ FADE=0, GU8V_FIREFLY_T1=1, GU8V_FIREFLY_T2=1, GU8V_FIREFLY_ T3=1, GU8V_FIREFLY_T4=1, GU8V_FIREFLY_CYCLETIME=1 and then call the function. The effects: The time of the T1~T4 are all 1.0s, blinking effect with flashing one time.

Inlet parameter is immediate data

Except that the inlet parameters must be immediate data, the following three functions are the same as the above functions whose inlet parameter is variable, so the definition of each inlet parameter is not described here.

PLAY+NONE

_PLAY_PICTURE_DISPLAY_IM MACRO Play_Number_IM,Frame_IM

Call method: _PLAY_PICTURE_DISPLAY_IM 2,1

Description: The first frame of the No.2 LDW file will be displayed.

PLAY+SHIFT

_PLAY_PICTURE_SHIFT_IM MACRO COLOR_Direction_IH,COLOR_Speed_IM,COLOR_ShiftHum_IH,COLOR_ShiftLoop_IM,COLOR_Rotate_IM

Call method: _PLAY_PICTURE_SHIFT_IM 2,1,1,2,1

Description: The image will move one column to the right in every 104ms, including rotation and move totally two times.

PLAY+FADE

_PLAY_PICTURE_FIREFLY_IM MACRO COLOR_BFS_IM,COLOR_T1_IM,COLOR_T2_IM,COLOR_T3_IM,COLOR_T4_IM,COLOR_TImes_IM

Call method: _PLAY_PICTURE_FIREFLY_IM 0,1,1,1,1,1

Description: The time of the T1~T4 are all 1.0s, blinking effect with flashing one time.



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