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(54) **Touch panel**

(57) The disclosure provides a touch panel which includes: a first substrate; a second substrate disposed oppositely to the first substrate, and the first substrate or the second substrate has a thickness smaller than or equal to 0.3 mm; a liquid crystal layer disposed between the first substrate and the second substrate; and a touch sensor directly formed on a surface of the second substrate away from the liquid crystal layer, wherein the touch sensor includes a patterned transparent conducting layer.

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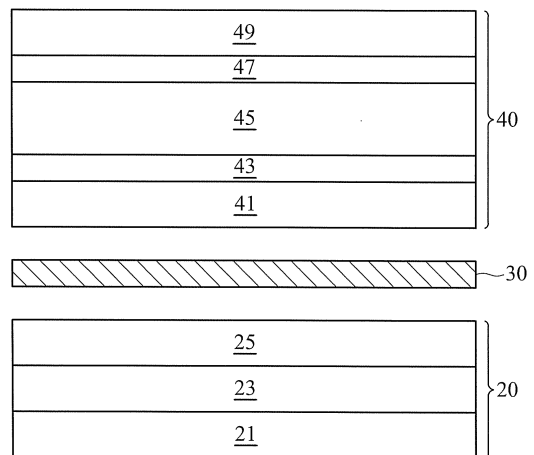


FIG. 1

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EUROPEAN SEARCH REPORT

Application Number
EP 11 16 5049

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 5 729 319 A (INOUE IPPEI [JP] ET AL) 17 March 1998 (1998-03-17)	1-4,9-15	INV. G02F1/133 G06F3/033
Y	* column 10, line 39 - line 43; figure 7 * -----	5-8	
X	JP 11 271739 A (CASIO COMPUTER CO LTD) 8 October 1999 (1999-10-08) * paragraph [0018] - paragraph [0019]; figure 3 *	1	TECHNICAL FIELDS SEARCHED (IPC) G06F G02F
X	JP 4 243412 A (SEIKO EPSON CORP) 31 August 1992 (1992-08-31) * paragraph [0015]; figures 1-2 *	1	
A	US 2006/146207 A1 (CHO JONG-WHAN [KR] ET AL) 6 July 2006 (2006-07-06) * paragraph [0035] - paragraph [0039] *	1	
Y	CN 101 699 377 A (SHENCHAO OPTICAL SHENZHEN CO L) 28 April 2010 (2010-04-28) * paragraph [0041] - paragraph [0053]; figures 4,4b,5 *	5-8	

The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 16 October 2012	Examiner Diot, Patrick
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

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EPO FORM 1503 03.82 (P04C01)



Application Number

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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

- Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):
- No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:
- The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION
SHEET B**

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-5, 7, 9-15

A touch panel, comprising:
 a first substrate;
 a second substrate disposed oppositely to the first substrate, wherein the first substrate or the second substrate has a thickness smaller than or equal to 0.3 mm;
 a liquid crystal layer disposed between the first substrate and the second substrate; and
 a touch sensor directly formed on a surface of the second substrate away from the liquid crystal layer, wherein the touch sensor comprises a patterned transparent conducting layer wherein the patterned transparent conducting layer comprises cadmium tin oxide (CTO), aluminum zinc oxide (AZO), indium tin zinc oxide (ITZO) zinc oxide, cadmium oxide (CdO), hafnium oxide (HfO), indium gallium zinc oxide (InGaZnO), indium gallium zinc magnesium oxide (InGaZnMgO), indium gallium magnesium oxide (InGaMgO) or indium gallium aluminum oxide (InGaAlO).

2. claims: 1, 6, 8

A touch panel, comprising:
 a first substrate;
 a second substrate disposed oppositely to the first substrate, wherein the first substrate or the second substrate has a thickness smaller than or equal to 0.3 mm;
 a liquid crystal layer disposed between the first substrate and the second substrate; and
 a touch sensor directly formed on a surface of the second substrate away from the liquid crystal layer, wherein the touch sensor comprises a patterned transparent conducting layer; wherein the touch panel further comprises a metal layer, a dielectric layer and a protection layer.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

16-10-2012

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专利名称(译)	触控面板		
公开(公告)号	EP2469327A3	公开(公告)日	2012-11-28
申请号	EP2011165049	申请日	2011-05-06
[标]申请(专利权)人(译)	群创光电股份有限公司		
申请(专利权)人(译)	奇美群创光电		
当前申请(专利权)人(译)	奇美群创光电		
[标]发明人	CHAN KAI CHIEH CHEN HSIN LI CHEN HUNG YU YANG CHIU LIEN PANG JIA PANG TING CHIN LUNG		
发明人	CHAN, KAI-CHIEH CHEN, HSIN-LI CHEN, HUNG-YU YANG, CHIU-LIEN PANG, JIA-PANG TING, CHIN-LUNG		
IPC分类号	G02F1/133 G06F3/033		
CPC分类号	G02F1/13338 G02F2001/133302 G06F3/0412 G06F2203/04103 Y10T29/49002 Y10T29/4913 Y10T29/49155		
优先权	100109064 2011-03-16 TW 099145660 2010-12-22 TW 100100027 2011-01-04 TW		
其他公开文献	EP2469327A2		
外部链接	Espacenet		

摘要(译)

本发明提供一种触控面板，包括：第一基板；第二基板，与第一基板相对设置，第一基板或第二基板的厚度小于或等于0.3mm；液晶层，设置在第一基板和第二基板之间；触摸传感器直接形成在远离液晶层的第二基板的表面上，其中触摸传感器包括图案化的透明导电层。

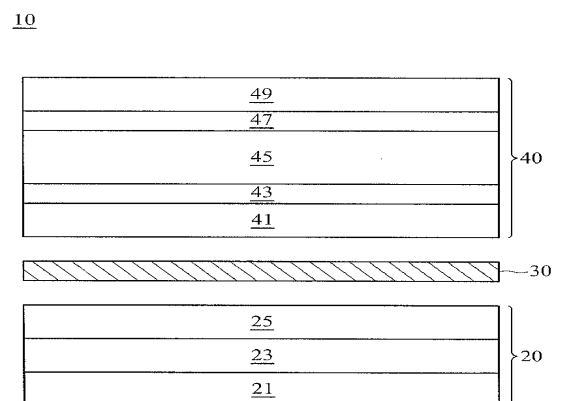


FIG. 1